# Site Clearance and Land Contamination Investigations

AS PER ERA REQUIREMENTS FOR THE MATERIAL TO BE EXCAVATED AT MRF SITE, ECOHIVE (EA/00042/20)

**WASTESERV MALTA LIMITED**

**CT2050/2019**

SERVICE TENDER FOR THE ENGINEERING, PROCUREMENT AND CONSTRUCTION OF A NEW MATERIALS RECOVERY FACILITY

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## DISCLAIMER

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# 1.0 INTRODUCTION

This activity is being carried out to address ERA requirements (EA/00042/20) in relation to a development application submitted by Wasteserv Malta (WSM) to construct a new Materials Recovery Facility (MRF). The proposed development will form part of the ECOHIVE Complex and will operate in conjunction with the other waste management facilities at Magħtab.

The Environment and Resources Authority (ERA) provides standard guidelines to carry out a land and groundwater contamination assessment. This report highlights the results obtained from the ERA approved methodology that was adopted.

## 1.1 Project Description

The proposed facility incorporates the development of a new Materials Recovery Facility (MRF) for the treatment of source-separated and co-mingled dry recyclables collected in Malta.

Separated recyclable waste streams including paper, cardboard, plastics and metals were previously processed at a Material Recovery Facility at the Sant' Antnin Solid Waste Treatment Plant in Marsascala. This MRF operated between February 2008 and May 2017 but was destroyed during a fire. In the absence of such a facility, the processing of the aforementioned waste streams has been restricted to a manual sorting line and a more recent temporary line at the Malta North Facility.

The Scheme is being proposed to manage such waste so as to meet the provisions of Malta's Waste Management Plan and achieve recovery and recycling targets stipulated in the Circular Economy Package. The proposed Scheme aims to minimise as much as possible all landfilling and increase as much as possible recyclables' recovery suitable for sales and/or export. The proposed Scheme intends to have a low processing cost per tonne of waste, good tolerance to contaminants in feed stock, low down time between failures, low down time and avoidance of extended periods when waste cannot be processed, and sufficient contingency planning for planned (or unplanned) maintenance and downtime.

The total processing capacity of the proposed MRF plant is 70 kilotons per annum. The site forms part of the ECOHIVE Master Plan and lies eastwards of the Zwejra landfill, adjacent to the existing Anaerobic Digester (AD) Plant. The footprint of the entire site is around 21,373m$^2$. The site currently comprises agricultural land, a dense cover of low-lying trees and remnants of local maquis/advanced garigue community.


Figure 1: Proposed site for the new material recovery facility

# 2.0 METHODOLOGY

## 2.1 Sampling stations & methodology

The preliminary investigation of land and groundwater contamination was guided by the sampling requirements stipulated in Table 1 of TORs for LGW Site Clearance issued by the ERA in 2021. The TORs state that sites between 10,000-50,000m$^2$ would require 5 to 15 points for land investigations, and 4 to 6 points for groundwater investigations, with one sample collected from each point.

The ground conditions within the MRF site are relatively homogenous in nature. Consequently, a reduced sampling effort was proposed based on the following justifications:

- The size of the scheme site is very small when compared to the potential catchment area of leachate contamination surrounding the landfill
- Some sections of the Scheme site footprint will remain unexcavated or barely excavated
- Previous ground contamination assessments at the WTE site revealed no hazardous contamination despite the site being closer to the dilute and disperse Maghtab landfill
- Excavation at the WTE site was significantly deeper than that proposed at the MRF site

The reduced sampling effort at the MRF site entailed ground sampling from four separate locations which represent the site's spatial extent and the degree of excavation proposed within it. Kindly refer to Figure 2 and Table 1 for further information on the sampling locations. Continuous core recovery and drilling with auger were carried out for land contamination testing at the four sampling boreholes.

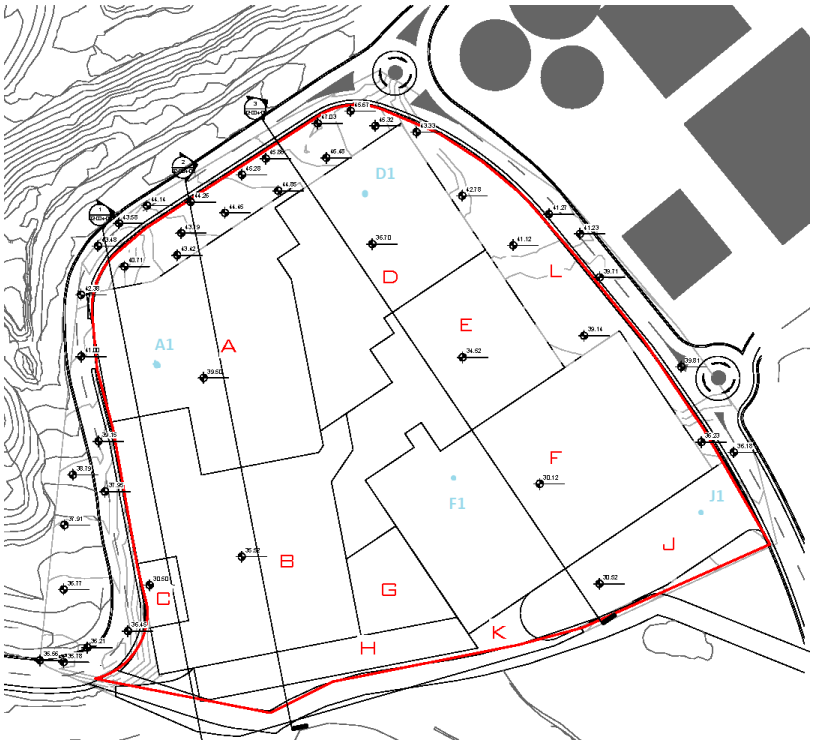


Figure 2: Sampling locations (Marked in Blue)

Table 1: Proposed Sampling Stations and Depths

| Area | GPS Coordinates (Indicative) | Planned average Excavation Depth | Proposed Sampling Depth (Boreholes) | Sampling Depth(s) |
|---|---|---|---|---|
| Area A (A1) | 35°56'32.0"N 14°26'30.7"E | 1.25m | 1.5m | <0.5m (A1S1/A1S2)<br>1.5m (A1M1/A1M2) |
| Area D (D1) | 35°56'34.2"N 14°26'30.6"E | 5.94m | 6.0m | <0.5m (D1S1/D1S2)<br>2.5m (D1M1/D1M2)<br>5.5m (D1D1/D1D2) |
| Area F (F1) | 35°56'33.0"N 14°26'33.5"E | 5.24m | 5.5m | <0.5m (F1S1/F1S2)<br>2.5m (F1M1/F1M2)<br>5.5m (F1D1/F1D2) |
| Area J (J1) | 35°56'34.1"N 14°26'35.3"E | 2.90m | 3.0m | <0.5m (J1S1/J1S2)<br>1.5m (J1M1/J1M2)<br>2.5m (J1D1/J1D2) |

Once the ground samples were collected, the same sampling points were drilled to deeper depths to carry out groundwater investigations of the underlying mean sea level aquifer (the site is located about 40-45m above MSL). At such depths, open hole borehole drilling was carried out.

The samples were stored and sealed in clean environments to ensure no cross-contamination occurred. Manual handling of samples was avoided. The samples were stored in glass containers and vials as appropriate. All samples were photographed and kept in a cool environment at a temperature < 8°C. Samples were then shipped to an ISO 17025 accredited laboratory for analysis within 24 hours.

## 2.2 Chemical analysis

Chemical analysis was carried out on the fine fraction sample (<2mm) since this is the fraction in which contaminants tend to accumulate. The chemical analyses were carried out at a laboratory accredited to EN ISO/IEC 17025. The chosen parameters are based on the Environmental Monitoring Plan for monitoring leachate contamination at Ghallis Landfill, as well as the parameters listed in the Italian Decreto 152 of 2006.

Table 2: Chemical parameters for Land Contamination testing with proposed LODs and methodologies

| Parameter | Industrial limit according to Italian Decreto 152 of 2006 (mg/kg DW) | LOD | u.o.m | Method |
|---|---|---|---|---|
| Mercury | 5 | 0.1 | Mg/kg | UNI EN 13657:2004 + UNI EN 16170:2016 |
| Cadmium | 15 | 0.2 | | |
| Lead | 1000 | 1 | | |
| Nickel | 500 | 1 | | |
| Arsenic | 50 | 1 | | |
| Chromium | 800 | 1 | | |
| Copper | 600 | 5 | | |
| Zinc | 1500 | 5 | | |
| Tin | 350 | 1 | | |
| Cyanides | 100 | 0.1 | Mg/kg | MU 2251:08 App C |
| PCBs (SUM of 7 PCB congeners: 28, 52, 101, 118, 138, 153 and 180) | 5 | 0.001 | Mg/kg | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 |
| PAHs (Sum) | 100 | | | |
| Benzo(a)anthracene | 10 | 0.01 | Mg/kg | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 |
| Benzo(a)pyrene | 10 | | | |
| Benzo(b)fluoranthene | 10 | | | |
| Benzo(k)fluoranthene | 10 | | | |
| Benzo(g,h,i)perylene | 10 | | | |
| Chrysene | 10 | | | |
| Dibenzo(a,e)pyrene | 10 | | | |
| Dibenzo(a,l)pyrene | 10 | | | |
| Dibenzo(a,i)pyrene | 10 | | | |
| Dibenzo(a,h)pyrene | 10 | | | |

| | | | | |
|---|---|---|---|---|
| Dibenzo(a,h)anthracene | 10 | | | |
| Indenopyrene | 5 | | | |
| Pyrene | 50 | | | |
| Napthalene | 50 | | | |
| Fluoranthene | N/A | | | |
| Dioxins and furans (PCDD, PCDF, WHO TEQ) | 100ng/kg | 0.00001 | Mg/kg | EPA 8280 B 2007 + UNEP/POPS/COP.3/ INF/27 11/04/2007 WHO 2005 TEF |
| Mineral oil (C10 to C40) | N/A | 1.0 | Mg/kg | UNI EN 14039:2005 |
| Benzene | 2 | 0.01 | Mg/kg | EPA 5035A 2002 + EPA 8260D 2018 |
| Toluene | 50 | | | |
| Ethylbenzene | 50 | | | |
| Xylene | 50 | | | |
| Total Organic Carbon (TOC) | N/A | 0.01 | % | UNI EN 13137:2002 |

Table 3: Chemical parameters for Groundwater Contamination testing with proposed LODs and methodologies

| Parameter | Limit according to Italian Decreto 152 of 2006 (µg/L) | LOD | U.O.M | Method |
|---|---|---|---|---|
| Total Hydrocarbons | 350 | 50 | µg/L | ISPRA Man 123 2015 |
| Fluorides | 1500 | 0.05 | µg/L | APAT CNR IRSA 4020 Man 29 2003 |
| Sulphates | 250 mg/L | 0.1 | Mg/L | |
| Iron | 200 | 20 | µg/L | UNI EN ISO 17294-2:2016 |
| Arsenic | 10 | 0.5 | | |
| Cadmium | 5 | 0.5 | | |
| Chromium total | 50 | 0.5 | | |
| Copper | 1000 | 5 | | |
| Mercury | 1 | 0.1 | | |
| Nickel | 20 | 1 | | |
| Lead | 10 | 0.5 | | |
| Antimony | 5 | 0.5 | | |
| Selenium | 10 | 1 | | |
| Zinc | 3000 | 10 | | |
| Benzene | 1 | 0.01 | µg/L | EPA 5030C 2003 + EPA 8260D 2018 |
| Ethylbenzene | 50 | | | |
| Styrene | 25 | | | |
| Toluene | 15 | | | |
| Para-xylene | 10 | | | |
| Benzo(a)anthracene | 0.1 | 0.001 | µg/L | EPA 3510C 1996 + EPA 8270E 2018 |
| Benzo(a)pyrene | 0.01 | | | |
| Benzo(b)fluoranthene | 0.1 | | | |
| Benzo(g,h,i)perylene | 0.01 | | | |
| Benzo(k)fluoranthene | 0.05 | | | |

| | | | | |
|---|---|---|---|---|
| Chrysene | 5 | | | |
| Dibenzo(a,h)anthracene | 0.01 | | | |
| Fluoranthene | 0.1 | | | |
| Indeno(1,2,3-c,d)pyrene | 0.1 | | | |
| Napthalene | 130 | | | |
| Pyrene | 50 | | | |
| Sum of PAHs | N/A | | | |
| Chloromethane | 1.5 | 0.01 | µg/L | EPA 5030C 2003 + EPA 8260D 2018 |
| Trichloromethane | 0.15 | | | |
| Vinyl chloride | 0.5 | | | |
| 1,2-Dichloroethane | 3 | | | |
| 1,1-Dichloroethene | 0.05 | 0.005 | | |
| 1,1,2-Trichloroethene | 1.5 | 0.01 | | |
| 1,2,3-Trichloropropane | 0.001 | 0.0001 | | |
| Tetrachloroethene | 1.1 | 0.01 | | |
| Hexachlorobutadiene | 0.15 | | | |
| Sum of halogenated aliphatic compounds | 10 | | | |
| Tribromomethane | 0.3 | | | |
| 1,2-Dibromomethane | 0.001 | 0.0001 | | |
| Dibromochloromethane | 0.13 | 0.01 | | |
| Bromodichloromethane | 0.17 | 0.01 | | |

## 2.3 HP Criteria Assessment

To determine whether the material to be excavated is hazardous (EWC code 17 05 03*) or non-hazardous (EWC code 17 05 04) waste, the results were evaluated against the HP criteria listed in Schedule 3 of S.L.549.63. If the limit values established by the HP criteria are exceeded, the waste is classified as being hazardous for that specific HP criterion.

When dealing with metals, the level of contamination for each parameter reflects the total mixtures and compounds present in all of their chemical forms, not just in their pure elemental form. Therefore, the suspected chemical compound was identified based on the contamination pressures within the area of study.

The process was carried out by identifying the potential hazardous material in the material, determining its molar mass and converting the % concentration of the metal form into the % concentration of the suspected hazardous metal compound. The respective hazard class and hazard statement of the contaminant was determined from the 1272/2008 Regulations and compared to Schedule 3 of SL 549.63 (WASTE REGULATIONS) to identify the properties of waste which render it hazardous.

The worst-case compound of the element/parameter was compared to the thresholds stipulated in Schedule 3 of SL 549.63 and classified as hazardous according to the following thresholds:

i. Exceeds the concentration limits for all the identified hazard statements, the material is classified as hazardous;
ii. Does not exceed any concentration limits of the identified hazard statements, the material is classified as non-hazardous;
iii. Exceeds the concentration limits for at least one of the identified hazard statements, the material is classified as hazardous for its related hazardous property.

## 2.4 Identifying the disposal route

Since the applicant may consider disposing the excavated material on land, additional chemical testing and leachate testing were carried out. Tests on the granular fraction of the material were conducted in accordance with Council Decision 2003/33/EC. The leachate testing was carried out in line with the analytical standards listed in Table 4. The findings are presented in a report remarking on the level of contamination to guide the ERA's decision.

Table 4: Leachate test parameters and methodologies

| Parameter | LOD | U.O.M | Method |
|---|---|---|---|
| Arsenic (As) | 0.0005 | mg/kg | UNI EN 12457-2:2004 + UNI EN ISO 17294-02:2016 |
| Antimony (Sb) | | | |
| Barium (Ba) | 0.01 | | |
| Cadmium (Cd) | 0.0005 | | |
| Chromium total (Cr) | | | |
| Copper (Cu) | 0.005 | | |
| Mercury (Hg) | 0.0001 | | |
| Molybdenum (Mo) | 0.001 | | |
| Nickel (Ni) | | | |
| Selenium (Se) | | | |
| Tin (Sn) | | | |
| Zinc (Zn) | 0.01 | | |
| Lead (Pb) | 0.001 | | |
| Chloride ($Cl^-$) | 0.1 | mg/kg | UNI EN 12457-2:2004 + UNI EN ISO 10304-1:2009 |
| Fluoride ($F^-$) | 0.05 | | |
| Sulphate ($SO_4^{2-}$) | 0.1 | | |
| Dissolved organic Carbon (DOC) | 0.1 | Mg/kg | UNI EN 12457-2:2004 + UNI EN 1484:1999 |
| Total Dissolved Solids (TDS) | 20 | Mg/kg | UNI EN 12457-2:2004 + APAT CNR IRSA 2090 A, Man 29 2003 |
| Phenol Index | 0.01 | Mg/kg | UNI EN 12457-2:2004 + UNI EN 16192:2012 + ISO6439:1990 |
| pH | - | Unit | UNI EN 12457-2:2004 + UNI EN ISO 10523:2012 |
| ANC (Acid Neutralisation Capacity) | 0.01 | mol/kg | UNI EN 12457-2:2004 + UNI CEN/TS 15364:2006 |

| ELUATE PREPARATION DATA | | |
|---|---|---|
| Mass parameters | Kg | UNI EN 12457-2:2004 |
| Size reduction method | - | Pestel and mortar |
| Moisture content ratio | % | UNI EN 12457-2:2004 |
| Leaching agent volume | L | |
| pH | Unit | |
| Conductivity | µS/cm | |
| Temperature | °C | |

# 3.0 RESULTS

## 3.1 Ground Contamination analysis

The test accreditation certificates of the results from the laboratory analysis of the samples are enclosed as Appendix 1. The results indicated in the tables below indicate that none of the samples exceed the limit stipulated in the Decreto 152 of 2006. Consequently, the material excavated from the MRF site is suitable for backfilling on site.

Table 5: results from Ground contamination analysis

| Analyte | U.O.M | Limit (Decreto 152 of 2006) | A1S1 | A1S2 | A1M1 | A1M2 | D1S1 | D1S2 | D1M1 | D1M2 | D1D1 | D1D2 | F1S1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | Mg/kg | 50 | 2.8 | 3.1 | 5.7 | 5.5 | 2.6 | 3.3 | 3.5 | 3.1 | 3.5 | 2.9 | 2.4 |
| Cadmium | Mg/kg | 15 | <0.20 | <0.20 | 0.28 | 0.31 | 0.26 | 0.34 | 0.24 | 0.26 | 0.23 | 0.21 | <0.20 |
| Chromium | Mg/kg | 800 | 22.0 | 22.0 | 48.0 | 46.0 | 37.0 | 25.0 | 13.0 | 16.0 | 10.0 | 10.0 | 10.0 |
| Mercury | Mg/kg | 5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | Mg/kg | 500 | 10 | 11 | 23 | 22 | 11 | 15 | 9 | 10 | 8 | 8 | 7 |
| Lead | Mg/kg | 1000 | 3.2 | 3.70 | 6.7 | 6.3 | 36.0 | 17.0 | 9.0 | 24.0 | 5.4 | 8.0 | 2.8 |
| Copper | Mg/kg | 600 | 10 | 33 | 17 | 17 | 30.0 | 23.0 | 7.0 | 11.0 | 6.0 | 7.0 | <5.0 |
| Tin | Mg/kg | 350 | <1.0 | <1.0 | <1.0 | <1.0 | 1.1 | 2.1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Zinc | Mg/kg | 1500 | 27 | 28 | 60 | 59 | 70 | 52 | 22 | 32 | 14 | 17 | 10 |
| Cyanides | Mg/kg | 100 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | Mg/kg | 10 | 0.170 | 0.074 | 0.079 | 0.067 | 0.027 | 0.043 | 0.023 | 0.260 | 0.019 | 0.024 | 0.015 |
| Benzo(a)pyrene | Mg/kg | 10 | 0.180 | 0.110 | 0.062 | 0.055 | 0.025 | 0.039 | 0.019 | 0.170 | 0.017 | 0.020 | 0.016 |
| Benzo(b)fluoranthene | Mg/kg | 10 | 0.110 | 0.058 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | 0.093 | <0.010 | <0.010 | <0.010 |
| Benzo(k)fluoranthene | Mg/kg | 10 | 0.059 | 0.035 | 0.031 | 0.028 | <0.010 | <0.010 | <0.010 | 0.062 | <0.010 | <0.010 | <0.010 |
| Benzo(g,h,i)perylene | Mg/kg | 10 | 0.096 | 0.063 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | 0.050 | <0.010 | <0.010 | <0.010 |
| Chrysene | Mg/kg | 10 | 0.130 | 0.059 | 0.055 | 0.047 | 0.020 | 0.032 | 0.016 | 0.180 | <0.010 | 0.018 | 0.010 |
| Dibenzo(a,e)pyrene | Mg/kg | 10 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibenzo(a,l)pyrene | Mg/kg | 10 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibenzo(a,i)pyrene | Mg/kg | 10 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibenzo(a,h)pyrene | Mg/kg | 10 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibenzo(a,h)anthracene | Mg/kg | 10 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Indenopyrene | Mg/kg | 5 | 0.086 | 0.052 | <0.01 | <0.010 | <0.010 | <0.010 | <0.010 | 0.055 | <0.010 | <0.010 | <0.010 |
| Pyrene | Mg/kg | 50 | 0.180 | 0.074 | 0.095 | 0.070 | 0.027 | 0.045 | 0.018 | 0.230 | 0.015 | 0.021 | 0.014 |
| Naphtalene | Mg/kg | 50 | 0.320 | 0.380 | 0.470 | 0.310 | 0.380 | 0.027 | 0.350 | 0.017 | 0.280 | 0.190 | <0.010 |
| Fluoranthene | Mg/kg | N/A | 0.280 | 0.093 | 0.160 | 0.120 | 0.048 | 0.085 | 0.035 | 0.410 | 0.030 | 0.038 | 0.022 |
| Summation of PAHs | Mg/kg | 100 | 1.610 | 1.000 | 0.950 | 0.700 | 0.530 | 0.270 | 0.460 | 1.530 | 0.360 | 0.310 | 0.077 |
| Benzene | Mg/kg | 2 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Toluene | Mg/kg | 50 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Ethylbenzene | Mg/kg | 50 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Xylene | Mg/kg | 50 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Summation (PCDD)/(PCDF) WHO-TEQ | Mg/kg | 0.0001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 |
| PCB28 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB52 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB101 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB118 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB138 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB153 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB180 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Total Organic Carbon | % | N/A | <0.01 | <0.01 | <0.01 | <0.01 | 0.280 | <0.01 | <0.01 | 0.190 | <0.01 | <0.01 | 0.53 |
| Mineral oils (C10-40) | Mg/kg | N/A | 64.0 | 133.0 | 61.0 | 67.0 | <1.0 | 170.0 | 41.0 | 60.0 | 37.0 | <1.0 | 27.4 |

| Analyte | U.O.M | Limit (Decreto 152 of 2006) | F1S2 | F1M1 | F1M2 | F1D1 | F1D2 | J1S1 | J1S2 | J1M1 | J1M2 | J1D1 | J1D2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | Mg/kg | 50 | 2.3 | 4.6 | 4.5 | 3.3 | 3.1 | 2.7 | 3.2 | 3.4 | 7.4 | 6.5 | 5.8 |
| Cadmium | Mg/kg | 15 | <0.20 | 0.20 | 0.22 | <0.20 | <0.20 | 0.30 | 0.34 | 0.25 | 0.57 | 0.37 | 0.34 |
| Chromium | Mg/kg | 800 | 10 | 13 | 13 | 10 | 10 | 8 | 10 | 8 | 17 | 18 | 16 |
| Mercury | Mg/kg | 5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | Mg/kg | 500 | 7 | 13 | 14 | 10 | 10 | 8 | 9 | 10 | 18 | 21 | 20 |
| Lead | Mg/kg | 1000 | 3.5 | <1.0 | <1.0 | <1.0 | <1.0 | 2.1 | 2.7 | <1.0 | <1.0 | <1.0 | <1.0 |
| Copper | Mg/kg | 600 | <5.0 | 6.8 | 6.5 | 5.6 | 5.3 | <5.0 | <5.0 | <5.0 | 7.1 | 7.4 | 6.5 |
| Tin | Mg/kg | 350 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Zinc | Mg/kg | 1500 | 10 | 17 | 17 | 13 | 13 | 11 | 14 | 11 | 23 | 26 | 23 |
| Cyanides | Mg/kg | 100 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | Mg/kg | 10 | 0.036 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Benzo(a)pyrene | Mg/kg | 10 | 0.034 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Benzo(b)fluoranthene | Mg/kg | 10 | 0.018 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Benzo(k)fluoranthene | Mg/kg | 10 | 0.016 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Benzo(g,h,i)perylene | Mg/kg | 10 | 0.012 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Chrysene | Mg/kg | 10 | 0.026 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Dibenzo(a,e)pyrene | Mg/kg | 10 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibenzo(a,l)pyrene | Mg/kg | 10 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibenzo(a,i)pyrene | Mg/kg | 10 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibenzo(a,h)pyrene | Mg/kg | 10 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibenzo(a,h)anthracene | Mg/kg | 10 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Indenopyrene | Mg/kg | 5 | 0.014 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Pyrene | Mg/kg | 50 | 0.036 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Naphtalene | Mg/kg | 50 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Fluoranthene | Mg/kg | N/A | 0.055 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Summation of PAHs | Mg/kg | 100 | 0.247 | < 0,010 | < 0,010 | < 0,010 | < 0,010 | < 0,010 | < 0,010 | < 0,010 | < 0,010 | < 0,010 | < 0,010 |
| Benzene | Mg/kg | 2 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Toluene | Mg/kg | 50 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Ethylbenzene | Mg/kg | 50 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Xylene | Mg/kg | 50 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Summation (PCDD)/(PCDF) WHO-TEQ | Mg/kg | 0.0001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 |
| PCB28 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB52 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB101 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB118 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB138 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB153 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| PCB180 | Mg/kg | 5 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Total Organic Carbon | % | N/A | 0.200 | <0.010 | <0.010 | <0.010 | <0.010 | 0.110 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Mineral oils (C10-40) | Mg/kg | N/A | 30.0 | 104.0 | 128.0 | 71.0 | 59.0 | 26.7 | 37.0 | <1.0 | 24.1 | <1.0 | <1.0 |

## 3.2 HP criteria assessment

Based on the lab analysis of the samples and the characterisation of waste according to Schedule 3 of SL 549.63 (WASTE REGULATIONS), the samples have been categorised as shown in Table 6. The results obtained indicate that the material is considered Non-Hazardous and therefore can be classified as EWC 17 05 04.

Table 6: Waste characterization process for ground samples

| CODE | DESCRIPTION | CLASSIFICATION[1] | | | | | | | | | | | | | | | | | | | | | | INTERPRETATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A1S1 | A1S2 | A1M1 | A1M2 | D1S1 | D1S2 | D1M1 | D1M2 | D1D1 | D1D2 | F1S1 | F1S2 | F1M1 | F1M2 | F1D1 | F1D2 | J1S1 | J1S2 | J1M1 | J1M2 | J1D1 | J1D2 | |
| HP1 | Explosive | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Not applicable, since no compounds with H200, H201, H202, H203, H204, H240 and H241 are present. |
| HP2 | Oxidising | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Despite the presence of H271 in chromium (III) chromate which would render all samples hazardous for HP2, this was considered unrealistic since:<br>1. Assuming that all metallic chromium is present as chromium (III) chromate, the concentration does not exceed 0.042% (w/w), which is extremely low;<br>2. Other chromium compounds are likely to be present, meaning the chromium (III) chromate concentration would be even lower |

[1] *H = hazardous and N = non-hazardous*

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HP3 | Flammable | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Not applicable, since no compounds with H220, H221, H222, H223, H224, H225, H226, H228, H242, H250, H251, H250, H260 and H261 properties are present. |
| HP4 | Irritant | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Non-hazardous. Even though H314 properties are demonstrated in chromium compounds, H318 is present in copper (I) oxide, and H315 & H319 were present in tributyltin oxide, their % concentrations did not exceed the cut-off values for HP4 (1-5%, 1% and 10%, respectively). |
| HP5 | Specific target organ toxicity | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Non-hazardous. Although H372 was present in cadmium oxide, nickel monoxide and tributyltin oxide, and H373 was present in dimethyl mercury and lead alkyls, the % concentrations did not exceed the threshold limits (1% and 10%, respectively). |
| HP6 | Acute toxicity | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Non-hazardous since the samples do not contain substances classified as H300, H301, H310, H311, H330, H331 above 0.1% or H302, H312 and H332 above 1% threshold limits. |
| HP7 | Carcinogenic | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Non-hazardous, since:<br>1. The total concentration of compounds with H350 does not exceed the threshold of 0.1%; and<br>2. The total concentration of compounds with H351 does not |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | exceed the threshold of 1%. Despite the fact that various compounds entail H350 and H351 properties. |
| HP8 | Corrosive | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Non-hazardous, since the concentration of compounds with H314 (chromium (III) chromate) does not exceed the threshold limit (5%). |
| HP9 | Infectious | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Not applicable, since none of the analysed compounds can be considered 'infectious'. |
| HP10 | Toxic for reproduction | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Non-hazardous as H360, H361 concentrations do not exceed the 0.3% and 3% w/w threshold values, respectively. |
| HP11 | Mutagenic | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Non-hazardous, even though H340 properties are present in benzo(a)pyrene and H341 is present through cadmium oxide, the concentrations do not exceed the threshold limits (0.1% and 1%, respectively). |
| HP12 | Acute toxic gas | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Not applicable, since no compounds with EUH029, EUH031 and EUH032 are present. |
| HP13 | Sensitising | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Non-hazardous, even though H317 is present through chromium (III) chromate, nickel monoxide and benzo(a)pyrene, the total concentration does not exceed the threshold limit (10%). |
| HP14 | Ecotoxic | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | Non-hazardous, since the total concentration of compounds with H400 and H410 do not exceed the threshold of 25%. |
| HP15 | Hazardous property not | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Not applicable, since no compounds with H205, |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | displayed in original waste | | | | | | | | | | | | | | | | | | | | | | EUH001, EUH019 and EUH044 are present. |

## 3.3 Leachate Results

The results obtained from the leachability tests described in Section 2.4 are summarised hereunder. The analytical results presented in mg/kg allows comparison to the EU Limits stipulated in 2003/33/EC. The certified reports of the two results obtained are included in Appendix I.

Table 7: Leachability results compared to EU limits in 2003/33/EC (Grey shading = not detected, Green = Below EU Limit)

| Parameter | Unit | A1S1L | A1S2L | A1M1L | A1M2L | D1S1L | D1S2L | D1M1L | D1M2L | D1D1L | D1D2L | F1S1L | EU Limits in 2003/33/EC L/S = 10 L/kg (mg/kg dry) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic LT | Mg/kg | <0.0005 | <0.0005 | 0.029 | 0.029 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 2 |
| Antimony LT | Mg/kg | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.7 |
| Barium LT | Mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 100 |
| Cadmium LT | Mg/kg | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 1 |
| Chromium LT | Mg/kg | 0.1100 | 0.1700 | <0.0005 | <0.0005 | <0.0005 | 0.1500 | <0.0005 | 0.0630 | <0.0005 | <0.0005 | <0.0005 | 10 |
| Mercury LT | Mg/kg | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.2 |
| Molybdenum LT | Mg/kg | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.110 | <0.001 | <0.001 | <0.001 | <0.001 | 10 |
| Nickel LT | Mg/kg | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 10 |
| Lead LT | Mg/kg | <0.001 | <0.001 | <0.001 | 0.076 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 10 |
| Copper LT | Mg/kg | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.250 | 2.300 | 0.270 | <0.005 | <0.005 | <0.005 | 50 |
| Selenium LT | Mg/kg | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.5 |
| Tin LT | Mg/kg | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.7 |
| Zinc LT | Mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 1.40 | <0.01 | <0.01 | <0.01 | <0.01 | 50 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride LT | Mg/kg | 808 | 813 | 326 | 280 | 301 | 330 | 295 | 628 | 362 | 305 | 85 | 15,000 |
| Fluoride LT | Mg/kg | 7.2 | 8.7 | 12.0 | 11.0 | 7.4 | 9.1 | 7.2 | 6.9 | 5.6 | 5.3 | 5.3 | 150 |
| Sulphate LT | Mg/kg | 396 | 543 | 176 | 151 | 353 | 348 | 335 | 463 | 363 | 283 | 62 | 20,000 |
| DOC LT | Mg/kg | 42.0 | 28.6 | 25.8 | 25.5 | 48.4 | 51.6 | 55.7 | 58.9 | 31.6 | 24.2 | 8.2 | 800 |
| TDS LT | Mg/kg | 6,900 | 4,900 | 1,500 | 1,300 | 1,700 | 1,800 | 1,900 | 3,800 | 2,000 | 1,600 | 400 | 60,000 |
| Mass of lab sample | Kg | 1.18 | 1.19 | 1.09 | 1.07 | 1.16 | 1.23 | 1.25 | 1.29 | 1.12 | 1.16 | 1.09 | - |
| Size reduction method | - | Mortal & pestle | | | | | | | | | | | - |
| Fraction greater than 4mm | % | 73.5 | 75.2 | 64.3 | 62.5 | 52.5 | 47.5 | 41.9 | 75.0 | 43.7 | 40.1 | 37.0 | - |
| Non-grindable material fraction | % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| Raw mass of the test portion | Kg | 0.101 | 0.100 | 0.103 | 0.103 | 0.098 | 0.098 | 0.097 | 0.096 | 0.095 | 0.094 | 0.095 | - |
| Moisture content ratio | % | 11 | 10 | 13 | 12 | 8 | 8 | 7 | 6.0 | 4.9 | 4.3 | 5.5 | - |
| Leaching agent volume | L | 0.889 | 0.890 | 0.887 | 0.887 | 0.892 | 0.892 | 0.893 | 0.894 | 0.895 | 0.896 | 0.895 | - |
| pH | Unit | 11.6 | 11.2 | 8.8 | 8.8 | 8.8 | 9.2 | 9.0 | 11.1 | 8.6 | 8.5 | 8.8 | - |
| Conductivity | µS/cm | 1,155 | 833 | 265 | 231 | 295 | 305 | 318 | 635 | 338 | 281 | 104 | - |
| Temperature | °C | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.4 | 18.5 | - |

| Parameter | Unit | F1S2 L | F1M1L | F1M2L | F1D1L | F1D2L | J1S1L | J1S2L | J1M1L | J1M2L | J1D1L | J1D2L | EU Limits in 2003/33/EC L/S = 10 L/kg (mg/kg dry) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic LT | Mg/kg | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0260 | 0.0280 | 2 |
| Antimony LT | Mg/kg | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.7 |
| Barium LT | Mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 100 |
| Cadmium LT | Mg/kg | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 1 |
| Chromium LT | Mg/kg | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 10 |
| Mercury LT | Mg/kg | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.2 |
| Molybdenum LT | Mg/kg | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 10 |
| Nickel LT | Mg/kg | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 10 |
| Lead LT | Mg/kg | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 10 |
| Copper LT | Mg/kg | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 50 |
| Selenium LT | Mg/kg | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.5 |
| Tin LT | Mg/kg | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.7 |
| Zinc LT | Mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 50 |
| Chloride LT | Mg/kg | 83 | 73 | 82 | 80 | 79 | 38.0 | 35.0 | 194 | 176 | 203 | 219 | 15,000 |
| Fluoride LT | Mg/kg | 5.4 | 6.1 | 6.2 | 5.7 | 5.8 | 5.1 | 6.4 | 6.8 | 6.6 | 5.8 | 6.0 | 150 |
| Sulphate LT | Mg/kg | 60 | 47.0 | 46.0 | 48.0 | 47.0 | 36.0 | 46.0 | 59 | 49.0 | 43.0 | 44.0 | 20,000 |
| DOC LT | Mg/kg | 9.1 | 4.9 | 4.8 | 5.2 | 5.0 | 12.1 | 11.3 | 6.2 | 4.3 | 5.3 | 5.0 | 800 |
| TDS LT | Mg/kg | 440 | 320 | 300 | 280 | 380 | 440 | 460 | 540 | 560 | 600 | 560 | 60,000 |
| Mass of lab sample | Kg | 1.14 | 1.17 | 1.12 | 1.15 | 1.13 | 1.25 | 1.23 | 1.15 | 1.29 | 1.28 | 1.32 | - |
| Size reduction method | - | Mortal & pestle | | | | | | | | | | | - |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fraction greater than 4mm | % | 39.5 | 33.7 | 35.7 | 45.5 | 44.2 | 80.6 | 82.5 | 42.3 | 29.4 | 31.2 | 30.4 | - |
| Non-grindable material fraction | % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| Raw mass of the test portion | Kg | 0.095 | 0.094 | 0.094 | 0.093 | 0.093 | 0.096 | 0.095 | 0.093 | 0.092 | 0.093 | 0.092 | - |
| Moisture content ratio | % | 5.2 | 4.1 | 3.8 | 2.8 | 3.3 | 7.0 | 5.3 | 2.8 | 2.4 | 2.9 | 2.7 | - |
| Leaching agent volume | L | 0.895 | 0.896 | 0.896 | 0.897 | 0.897 | 0.894 | 0.895 | 0.897 | 0.898 | 0.897 | 0.898 | - |
| pH | Unit | 8.8 | 9.1 | 9.2 | 9.1 | 9.2 | 8.6 | 9.1 | 9.2 | 9.3 | 9.2 | 9.2 | - |
| Conductivity | µS/cm | 101 | 93 | 92 | 93 | 94 | 91 | 80 | 127 | 123 | 122 | 127 | - |
| Temperature | °C | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | - |

The concentration of parameters across all samples is similar, indicating little discrepancy between the leachability characteristics of sediment within the stations sampled.

When comparing the results obtained to the EU Council Directive 2003/33/EC Annex, Section 2.2.2 – Limit Values for non-Hazardous Wastes, it is evident that none of the samples exceed the threshold limit values. As previously stated, the material excavated from the site can be backfilled or disposed at a local landfill. The Contractor shall inform the ERA about the preferred disposal option.

## 3.4 Groundwater contamination analysis

The test accreditation certificates for the ground water contamination results are enclosed in Appendix I. Out of the four monitoring points proposed in the method statement, the drilling contractor only managed to retrieve water samples from two (A1 and J1).

The results obtained were compared to the Limits defined in Decreto 152 of 2006. Exceedances were noted at J1W1 for the concentration of Iron, Sulphate and Tetrachloroethylene. Similarly, sulphate and tetrachloroethylene thresholds were also exceeded at A1W1.

Although Iron and Tetrachloroethylene are not frequently observed in Maltese groundwater bodies, they have been detected and reported in Malta's 3rd River Basin Management Plan. Historic landfill leachate may have contributed to such results due to the improper disposal of lead-containing materials, corroding materials and other forms of industrial wastes in the landfill.

On the other hand, sulphate is frequently encountered at high levels in mean-sea level and coastal aquifers. This is primarily attributed to sea-water intrusion into the aquifer, however anthropogenic sources such as fertiliser use and wastewater/leachate discharges may also be attributed.

The works on site are unlikely to generate any direct impact on the underlying groundwater body. Excavation works will be limited to the first few metres below existing topographical levels. Once operational, the entire site shall be rendered impermeable to prohibit the percolation of any hazardous liquids which may escape into the groundwater.

Table 8: Groundwater contamination assessment (Green = Below, Yellow = Above Threshold limit)

| Analyte | U.O.M | Limit (Decreto 152 of 2006) | A1W1 | J1W1 |
|---|---|---|---|---|
| Antimony | µg/L | 5 | <0.5 | <0.5 |
| Arsenic | µg/L | 10 | 0.77 | 1.90 |
| Cadmium | µg/L | 5 | <0.5 | <0.5 |
| Chromium | µg/L | 50 | 7.4 | 22.0 |
| Iron | µg/L | 200 | 63.0 | 220.0 |

| | | | | |
|---|---|---|---|---|
| Mercury | µg/L | 1.0 | <0.1 | <0.1 |
| Nickel | µg/L | 20 | 5.0 | 13.0 |
| Lead | µg/L | 10 | 3.3 | <0.5 |
| Copper | µg/L | 1,000 | 7.2 | <5 |
| Selenium | µg/L | 10 | <1 | <1 |
| Zinc | µg/L | 3,000 | 83 | <10 |
| Fluorides | µg/L | 1,500 | 415 | 497 |
| Sulphates | mg/L | 250 | 357 | 455 |
| Benzene | µg/L | 1 | <0.01 | <0.01 |
| Ethylbenzene | µg/L | 50 | <0.01 | 0.153 |
| Toluene | µg/L | 15 | 2.48 | <0.01 |
| Styrene | µg/L | 25 | 0.242 | 0.230 |
| para-Xylene | µg/L | 10 | <0.01 | <0.01 |
| Chloromethane | µg/L | 1.5 | <0.01 | <0.01 |
| Trichloromethane | µg/L | 0.15 | <0.01 | <0.01 |
| Vinyl chloride | µg/L | 0.5 | <0.01 | <0.01 |
| 1,2-Dichloroethane | µg/L | 3 | <0.01 | <0.01 |
| 1,1-Dichloroethylene | µg/L | 0.05 | <0.005 | <0.005 |
| 1,1,2-Trichloroethane | µg/L | 1.5 | <0.01 | <0.01 |
| 1,2,3-trichloropropane | µg/L | 0.001 | <0.0001 | <0.0001 |
| Tetrachloroethylene | µg/L | 1.1 | 2.49 | 1.25 |
| Hexachlorobutadiene | µg/L | 0.15 | <0.01 | <0.01 |
| Summation Organhalogen | µg/L | 10 | 2.49 | 1.25 |
| Tribromomethane | µg/L | 0.3 | <0.01 | <0.01 |
| 1,2-Dibromomethane | µg/L | 0.0001 | <0.0001 | <0.0001 |
| Dibromochloromethane | µg/L | 0.13 | <0.01 | <0.01 |
| Bromodichloromethane | µg/L | 0.17 | <0.01 | <0.01 |
| Benzo(a)anthracene | µg/L | 0.1 | <0.001 | <0.001 |
| Benzo(a)pyrene | µg/L | 0.01 | <0.001 | <0.001 |
| Benzo(b)fluoranthene | µg/L | 0.1 | <0.001 | <0.001 |
| Benzo(g,h,i)perylene | µg/L | 0.01 | <0.001 | <0.001 |
| Chrysene | µg/L | 5 | <0.001 | <0.001 |
| Dibenzo(a,h)anthracene | µg/L | 0.01 | <0.001 | <0.001 |
| Fluoranthene | µg/L | 0.1 | <0.001 | <0.001 |
| Indeno(1,2,3-c,d)pyrene | µg/L | 0.1 | <0.001 | <0.001 |
| Pyrene | µg/L | 50 | <0.001 | <0.001 |
| Naphthalene | µg/L | 130 | <0.001 | <0.001 |
| Summation polycyclic aromatic hydrocarbons | µg/L | N/A | <0.001 | <0.001 |
| Total Hydrocarbons | µg/L | 350 | <50 | <50 |

# APPENDIX I: CERTIFIED LABORATORY REPORTS

Test Report n°: **2158081-001** of: **12/01/2024**

Description: **Waste sample from sampling point named "A1S1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014D-001 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158081**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 2,80 | mg/kg | 0,60 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,2 | mg/kg | | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 22,0 | mg/kg | 4,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,20 | mg/kg | 0,70 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158081-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 27,0 | mg/kg | 7,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,170 | mg/kg | 0,060 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,180 | mg/kg | 0,063 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,110 | mg/kg | 0,039 | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,059 | mg/kg | 0,021 | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,096 | mg/kg | 0,034 | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,130 | mg/kg | 0,046 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158081-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,086 | mg/kg | 0,030 | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,180 | mg/kg | 0,063 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,32 | mg/kg | 0,11 | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,280 | mg/kg | 0,098 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158081-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 64 | mg/kg | 22 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158081-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158081-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".

By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".

By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".

By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".

By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".

For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".

"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".

For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".

"Xylene" means the "Sum of m-p Xylene and o-Xylene".

The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158081-002** of: **12/01/2024**

Description: **Waste sample from sampling point named "A1S2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014D-002 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158081**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,10 | mg/kg | 0,70 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,2 | mg/kg | | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 22,0 | mg/kg | 4,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 11,0 | mg/kg | 2,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,70 | mg/kg | 0,80 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158081-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 33,0 | mg/kg | 5,0 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 28,0 | mg/kg | 7,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,074 | mg/kg | 0,026 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,110 | mg/kg | 0,039 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,058 | mg/kg | 0,020 | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,035 | mg/kg | 0,012 | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,063 | mg/kg | 0,022 | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,059 | mg/kg | 0,021 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158081-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,052 | mg/kg | 0,018 | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,074 | mg/kg | 0,026 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,38 | mg/kg | 0,13 | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,093 | mg/kg | 0,033 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158081-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 133 | mg/kg | 47 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158081-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158081-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".

By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".

By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".

By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".

By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".

For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".

"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".

For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".

"Xylene" means the "Sum of m-p Xylene and o-Xylene".

The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158081-003** of: **12/01/2024**

Description: **Waste sample from sampling point named "A1M1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014D-003 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158081**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 5,7 | mg/kg | 1,3 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,280 | mg/kg | 0,080 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 48,0 | mg/kg | 9,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 23,0 | mg/kg | 4,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 6,7 | mg/kg | 1,4 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158081-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 17,0 | mg/kg | 3,0 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 60 | mg/kg | 16 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,079 | mg/kg | 0,028 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,062 | mg/kg | 0,022 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,031 | mg/kg | 0,011 | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,055 | mg/kg | 0,019 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158081-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,095 | mg/kg | 0,033 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,47 | mg/kg | 0,16 | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,160 | mg/kg | 0,056 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158081-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 61 | mg/kg | 21 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158081-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158081-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Uncertainties made on the basis of the measures declared by the client / applicant.

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".

By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".

By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".

By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".

By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".

For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".

"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".

For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".

"Xylene" means the "Sum of m-p Xylene and o-Xylene".

The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158081-004** of: **12/01/2024**

Description: **Waste sample from sampling point named "A1M2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014D-004 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158081**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 5,5 | mg/kg | 1,2 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,310 | mg/kg | 0,090 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 46,0 | mg/kg | 9,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 22,0 | mg/kg | 4,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 6,3 | mg/kg | 1,3 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158081-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 17,0 | mg/kg | 3,0 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 59 | mg/kg | 16 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,067 | mg/kg | 0,023 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,055 | mg/kg | 0,019 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0280 | mg/kg | 0,0098 | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,047 | mg/kg | 0,016 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158081-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,070 | mg/kg | 0,025 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,31 | mg/kg | 0,11 | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,120 | mg/kg | 0,042 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158081-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 67 | mg/kg | 23 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158081-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
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**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

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"RL" = Reporting Limit Limit of quantification of the test method
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The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
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**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

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The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158081-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158081-005** of: **12/01/2024**

Description: **Waste sample from sampling point named "D1S1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014D-005 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158081**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 2,60 | mg/kg | 0,60 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,260 | mg/kg | 0,070 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 37,0 | mg/kg | 7,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 11,0 | mg/kg | 2,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 36,0 | mg/kg | 6,0 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158081-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 30,0 | mg/kg | 5,0 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | 1,10 | mg/kg | 0,40 | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 70 | mg/kg | 19 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0270 | mg/kg | 0,0095 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0250 | mg/kg | 0,0088 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0200 | mg/kg | 0,0070 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158081-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0270 | mg/kg | 0,0095 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,38 | mg/kg | 0,13 | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,048 | mg/kg | 0,017 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158081-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | 0,280 | % | 0,050 | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | < 1 | mg/kg | | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158081-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158081-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".

By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".

By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".

By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".

By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".

For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".

"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".

For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".

"Xylene" means the "Sum of m-p Xylene and o-Xylene".

The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158081-006** of: **12/01/2024**

Description: **Waste sample from sampling point named "D1S2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014D-006 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158081**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,30 | mg/kg | 0,90 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,340 | mg/kg | 0,090 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 25,0 | mg/kg | 5,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 15,0 | mg/kg | 3,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 17,0 | mg/kg | 3,0 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158081-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 23,0 | mg/kg | 4,0 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | 2,10 | mg/kg | 0,70 | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 52 | mg/kg | 14 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,043 | mg/kg | 0,015 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,039 | mg/kg | 0,014 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,032 | mg/kg | 0,011 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158081-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,045 | mg/kg | 0,016 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0270 | mg/kg | 0,0095 | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,085 | mg/kg | 0,030 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158081-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 170 | mg/kg | 59 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158081-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158081-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".

By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".

By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".

By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".

By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".

For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".

"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".

For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".

"Xylene" means the "Sum of m-p Xylene and o-Xylene".

The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158081-007** of: **12/01/2024**

Description: **Waste sample from sampling point named "D1M1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014D-007 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158081**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,50 | mg/kg | 0,70 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,240 | mg/kg | 0,060 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 13,0 | mg/kg | 3,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 9,0 | mg/kg | 1,8 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 9,0 | mg/kg | 1,6 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158081-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 7,0 | mg/kg | 1,2 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 22,0 | mg/kg | 6,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0230 | mg/kg | 0,0081 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0190 | mg/kg | 0,0067 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0160 | mg/kg | 0,0056 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158081-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0180 | mg/kg | 0,0063 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,35 | mg/kg | 0,12 | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,035 | mg/kg | 0,012 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158081-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 41 | mg/kg | 14 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158081-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
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If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
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In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158081-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158081-008** of: **12/01/2024**

Description: **Waste sample from sampling point named "D1M2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014D-008 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158081**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,10 | mg/kg | 0,70 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,260 | mg/kg | 0,070 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 16,0 | mg/kg | 3,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 24,0 | mg/kg | 4,0 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158081-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 11,0 | mg/kg | 2,0 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 32,0 | mg/kg | 9,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,260 | mg/kg | 0,091 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,170 | mg/kg | 0,060 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,093 | mg/kg | 0,033 | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,062 | mg/kg | 0,022 | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,050 | mg/kg | 0,018 | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,180 | mg/kg | 0,063 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158081-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,055 | mg/kg | 0,019 | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,230 | mg/kg | 0,081 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0170 | mg/kg | 0,0060 | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,41 | mg/kg | 0,14 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158081-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | 0,190 | % | 0,030 | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 60 | mg/kg | 21 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158081-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

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In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158081-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".

By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".

By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".

By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".

By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".

For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".

"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".

For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".

"Xylene" means the "Sum of m-p Xylene and o-Xylene".

The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158081-009** of: **12/01/2024**

Description: **Waste sample from sampling point named "D1D1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014D-009 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158081**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,50 | mg/kg | 0,70 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,230 | mg/kg | 0,060 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 8,0 | mg/kg | 1,7 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 5,4 | mg/kg | 1,0 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158081-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 6,0 | mg/kg | 1,0 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 14,0 | mg/kg | 4,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0190 | mg/kg | 0,0067 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0170 | mg/kg | 0,0060 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158081-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0150 | mg/kg | 0,0053 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,280 | mg/kg | 0,098 | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,030 | mg/kg | 0,011 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158081-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 37 | mg/kg | 13 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158081-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158081-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".

By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".

By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".

By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".

By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".

For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".

"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".

For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".

"Xylene" means the "Sum of m-p Xylene and o-Xylene".

The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158081-010** of: **12/01/2024**

Description: **Waste sample from sampling point named "D1D2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014D-010 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158081**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 2,90 | mg/kg | 0,60 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,210 | mg/kg | 0,060 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 8,0 | mg/kg | 1,5 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 8,0 | mg/kg | 1,3 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158081-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 7,0 | mg/kg | 1,1 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 17,0 | mg/kg | 5,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0240 | mg/kg | 0,0084 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0200 | mg/kg | 0,0070 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0180 | mg/kg | 0,0063 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158081-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0210 | mg/kg | 0,0074 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,190 | mg/kg | 0,067 | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,038 | mg/kg | 0,013 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158081-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | < 1 | mg/kg | | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158081-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158081-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".

By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".

By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".

By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".

By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".

For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".

"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".

For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".

"Xylene" means the "Sum of m-p Xylene and o-Xylene".

The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-001** of: **25/01/2024**

Description: **Waste sample from sampling point named "F1S1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-011 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 2,40 | mg/kg | 0,50 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,2 | mg/kg | | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 7,0 | mg/kg | 1,4 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 2,80 | mg/kg | 0,60 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | < 5 | mg/kg | | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 3,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0150 | mg/kg | 0,0053 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0160 | mg/kg | 0,0056 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0100 | mg/kg | 0,0035 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0140 | mg/kg | 0,0049 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0220 | mg/kg | 0,0077 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | 0,53 | % | 0,10 | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 27,4 | mg/kg | 9,6 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-002** of: **25/01/2024**

Description: **Waste sample from sampling point named "F1S2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-012 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 2,30 | mg/kg | 0,50 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,2 | mg/kg | | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 7,0 | mg/kg | 1,4 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,50 | mg/kg | 0,70 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | < 5 | mg/kg | | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 3,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,036 | mg/kg | 0,013 | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,034 | mg/kg | 0,012 | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0180 | mg/kg | 0,0063 | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0160 | mg/kg | 0,0056 | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0120 | mg/kg | 0,0042 | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0260 | mg/kg | 0,0091 | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,0140 | mg/kg | 0,0049 | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,036 | mg/kg | 0,013 | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | 0,055 | mg/kg | 0,019 | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
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| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | 0,200 | % | 0,040 | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 30 | mg/kg | 10 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
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**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

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"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
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The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-003** of: **25/01/2024**

Description: **Waste sample from sampling point named "F1M1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-013 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 4,60 | mg/kg | 0,90 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,200 | mg/kg | 0,060 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 13,0 | mg/kg | 3,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 13,0 | mg/kg | 2,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 6,8 | mg/kg | 1,2 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 17,0 | mg/kg | 5,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 104 | mg/kg | 36 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-004** of: **25/01/2024**

Description: **Waste sample from sampling point named "F1M2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-014 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 4,50 | mg/kg | 0,90 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,220 | mg/kg | 0,060 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 13,0 | mg/kg | 3,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 14,0 | mg/kg | 3,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 6,5 | mg/kg | 1,1 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 17,0 | mg/kg | 5,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 128 | mg/kg | 45 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-005** of: **25/01/2024**

Description: **Waste sample from sampling point named "F1D1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-015 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,30 | mg/kg | 0,80 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,2 | mg/kg | | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 5,6 | mg/kg | 1,0 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 13,0 | mg/kg | 4,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 71 | mg/kg | 25 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-006** of: **25/01/2024**

Description: **Waste sample from sampling point named "F1D2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-016 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,10 | mg/kg | 0,70 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,2 | mg/kg | | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 5,30 | mg/kg | 0,90 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 13,0 | mg/kg | 4,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 59 | mg/kg | 21 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
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The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-007** of: **25/01/2024**

Description: **Waste sample from sampling point named "J1S1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-017 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 2,70 | mg/kg | 0,60 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,300 | mg/kg | 0,080 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 8,0 | mg/kg | 1,9 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 8,0 | mg/kg | 1,5 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 2,10 | mg/kg | 0,50 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | < 5 | mg/kg | | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 11,0 | mg/kg | 3,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | 0,110 | % | 0,020 | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 26,7 | mg/kg | 9,4 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-008** of: **25/01/2024**

Description: **Waste sample from sampling point named "J1S2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-018 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,20 | mg/kg | 0,70 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,340 | mg/kg | 0,090 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 9,0 | mg/kg | 1,8 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | 2,70 | mg/kg | 0,60 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | < 5 | mg/kg | | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 14,0 | mg/kg | 4,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 37 | mg/kg | 13 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-009** of: **25/01/2024**

Description: **Waste sample from sampling point named "J1M1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-019 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 3,40 | mg/kg | 0,70 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,250 | mg/kg | 0,060 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 8,0 | mg/kg | 1,9 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 10,0 | mg/kg | 2,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | < 5 | mg/kg | | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 11,0 | mg/kg | 3,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | < 1 | mg/kg | | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-010** of: **25/01/2024**

Description: **Waste sample from sampling point named "J1M2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-020 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**
Sampling Point: \\
Sampling Place: \\
Sampling Date: **15-dic-23**
Sample Reception Date: **11-gen-24**
Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**
Sampling Method: **By the customer**
Sampler Technician: \\
Annex: **NO**
Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 7,4 | mg/kg | 1,4 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,57 | mg/kg | 0,15 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 17,0 | mg/kg | 4,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 18,0 | mg/kg | 4,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 7,1 | mg/kg | 1,2 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 23,0 | mg/kg | 6,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | 24,1 | mg/kg | 8,4 | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

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The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-011** of: **25/01/2024**

Description: **Waste sample from sampling point named "J1D1" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-021 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**
Sampling Point: \\
Sampling Place: \\
Sampling Date: **15-dic-23**
Sample Reception Date: **11-gen-24**
Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**
Sampling Method: **By the customer**
Sampler Technician: \\
Annex: **NO**
Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 6,5 | mg/kg | 1,3 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,37 | mg/kg | 0,10 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 18,0 | mg/kg | 4,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 21,0 | mg/kg | 4,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-011**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 7,4 | mg/kg | 1,3 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 26,0 | mg/kg | 7,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-011**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-011**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | < 1 | mg/kg | | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-011**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-011**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158273-012** of: **25/01/2024**

Description: **Waste sample from sampling point named "J1D2" - Sampled by the customer - Profile 03 - Ecohive complex in Maghtab, Naxxar ID sunlab 2023012014D-022 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158273**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **24-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Arsenico | UNI EN 13657:2004 + UNI EN 16170:2016 | 5,8 | mg/kg | 1,2 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN 13657:2004 + UNI EN 16170:2016 | 0,340 | mg/kg | 0,090 | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN 13657:2004 + UNI EN 16170:2016 | 16,0 | mg/kg | 4,0 | | | |
| *Chromium* | | | | | | | |
| Mercurio | UNI EN 13657:2004 + UNI EN 16170:2016 | < 0,1 | mg/kg | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN 13657:2004 + UNI EN 16170:2016 | 20,0 | mg/kg | 4,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2158273-012**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN 13657:2004 + UNI EN 16170:2016 | 6,5 | mg/kg | 1,1 | | | |
| *Copper* | | | | | | | |
| Stagno | UNI EN 13657:2004 + UNI EN 16170:2016 | < 1 | mg/kg | | | | |
| *Tin* | | | | | | | |
| Zinco | UNI EN 13657:2004 + UNI EN 16170:2016 | 23,0 | mg/kg | 6,0 | | | |
| *Zinc* | | | | | | | |
| **ANIONI** | | | | | | | |
| *ANIONS* | | | | | | | |
| Cianuri | MU 2251:08 App C | < 0,1 | mg/kg | | | | |
| *Cyanides* | | | | | | | |
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (a) pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (b) fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo (k) fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,e)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,e) pyrene* | | | | | | | |

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Continuation of Test Report n°: **2158273-012**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Dibenzo(a,l)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,l) pyrene* | | | | | | | |
| Dibenzo(a,i)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo (a,i) pyrene* | | | | | | | |
| Dibenzo(a,h)pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)pyrene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Indenopirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Indeno (1,2,3-c,d) pyrene* | | | | | | | |
| Pirene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Naphthalene* | | | | | | | |
| Fluorantene | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,01 | mg/kg | | | | |
| *Fluoranthene* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Benzene* | | | | | | | |
| Toluene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Toluene* | | | | | | | |
| Etilbenzene | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Ethylbenzene* | | | | | | | |
| Xileni | EPA 5035A 2002 + EPA 8260D 2018 | < 0,01 | mg/kg | | | | |
| *Xylenes* | | | | | | | |

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Continuation of Test Report n°: **2158273-012**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **DIOSSINE E FURANI** | | | | | | | |
| *DIOXINS AND FURANS* | | | | | | | |
| Sommatoria (PCDD) / (PCDF) WHO-TEQ | EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEF | < 0,00001 | mg/kg | | | | |
| *Summation (PCDD)/ (PCDF) WHO-TEQ* | | | | | | | |
| **PCB con GC-QQQ** | | | | | | | |
| *PCB con GC-QQQ* | | | | | | | |
| PCB28 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB28* | | | | | | | |
| PCB52 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB52* | | | | | | | |
| PCB101 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB101* | | | | | | | |
| PCB118 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB118* | | | | | | | |
| PCB138 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB138* | | | | | | | |
| PCB153 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB153* | | | | | | | |
| PCB180 | EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018 | < 0,001 | mg/kg | | | | |
| *PCB180* | | | | | | | |
| **ALTRE SOSTANZE** | | | | | | | |
| *OTHER SUBSTANCES* | | | | | | | |
| TOC | UNI EN 13137:2002 | < 0,01 | % | | | | |
| *TOC* | | | | | | | |
| Oli Minerali (C10÷40) | UNI EN 14039:2005 | < 1 | mg/kg | | | | |
| *Mineral Oils (C10÷40)* | | | | | | | |

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Continuation of Test Report n°: **2158273-012**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158273-012**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab.1A / 1B**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (a) anthracene, Benzo (a) pyrene, Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, l) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, h) pyrene ".
By "Sum of Aromatic Organic Solvents" we mean the "Sum of Ethylbenzene, Styrene, Toluene, Xylene".
By "Aromatic Amine Sum" we mean the "Sum of Aniline, o-Anisidine, m-p-Anisidine, Diphenylamine, p-Toluidine".
By "1,2-Dichlorethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichlorethylene".
By "Chloronitrobenzene" we mean the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene and 1-Chloro-4-Nitrobenzene".
For Chlordan we mean the "Sum of alpha-Chlordane and gamma-Chlordane".
"DDD, DDT, DDE" means the "Sum of 2, 4'-DDD, 2, 4'-DDE, 2, 4'-DDT, 4, 4'-DDD, 4, 4'-DDE and 4 , 4'-DDT ".
For "Organotin Compounds" we mean the "Sum of monobutyl-tin, dibutyl-tin, tributyl-tin, monooctyl-tin, tetrabutyl-tin, dioctyl-tin, triphenyl-tin, tricyclohexyl-tin".
"Xylene" means the "Sum of m-p Xylene and o-Xylene".
The analytical results are expressed on "ss".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2158080-001** of: **30/01/2024**

Description: **Waste sample from sampling point named "A1S1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014C-001 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158080**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | 0,11 | mg/kg | 0,03 | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158080-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 808 | mg/kg | 140 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 7,2 | mg/kg | 1,8 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 396 | mg/kg | 69 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 42,0 | mg/kg | 6,8 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 6900 | mg/kg | 550 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN ISO 14402:2004 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 11,6 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,18 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158080-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni<br>*Size reduction method* | | Pestle and mortar | | | | | |
| Frazione maggiore di 4mm (%)<br>*Fraction greater than 4mm (%)* | | 73,5 | | | | | |
| Frazione materiale non macinabile (%)<br>*Non-grind material fraction (%)* | | 0 | | | | | |
| Massa grezza Mw della porzione di prova (kg)<br>*Raw mass Mw of the test portion (kg)* | | 0,101 | | | | | |
| Rapporto del contenuto di umidità MC (%)<br>*MC moisture content ratio (%)* | | 11 | | 2 | | | |
| Data della prova che ha prodotto l'eluato<br>*Date of the test which produced the eluate* | | 29/12/2023 | | | | | |
| Volume agente lisciviante (l)<br>*Leaching agent volume (l)* | | 0,889 | | | | | |
| pH (Unità)<br>*pH (Unit)* | | 11,6 | | 0,1 | | | |
| Conducibilità (µS/cm)<br>*Conductivity (µS/cm)* | - | 1155 | | 250 | | | |
| Temperatura (°C)<br>*Temperature (°C)* | | 18,4 | | | | | |

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Continuation of Test Report n°: **2158080-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158080-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158080-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158080-001
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Test Start Date: 08/01/2024
Test Finish Date: 11/01/2024

| Test | 1 | LT | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HNO3 Concentration (mol / L) | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| HNO3 Volume (mL) | / | / | 2 | 5 | 10 | 50 | 75 | 100 | 125 | 150 | 200 |
| mol HNO3 (A) | 0,0000 | 0 | 0,1433 | 0,3582 | 0,7164 | 3,5822 | 5,3733 | 7,1645 | 8,9556 | 10,7467 | 14,3289 |
| NaOH Concentration (mol / L) | 0,1 | / | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 5 | / | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0072 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0072 | 0 | 0,1433 | 0,3582 | 0,7164 | 3,5822 | 5,3733 | 7,1645 | 8,9556 | 10,7467 | 14,3289 |
| mANC (mmol / kg) | -7,16 | 0 | 143,29 | 358,22 | 716,45 | 3582,23 | 5373,34 | 7164,46 | 8955,57 | 10746,69 | 14328,92 |
| $w_{dr}$ (%) | 88,79 | 88,79 | 88,79 | 88,79 | 88,79 | 88,79 | 88,79 | 88,79 | 88,79 | 88,79 | 88,79 |
| un-dried mass of the test portion (g) | 78,6 | 101 | 78,6 | 78,6 | 78,6 | 78,6 | 78,6 | 78,6 | 78,6 | 78,6 | 78,6 |
| $M_d$ (g) | 69,79 | 90 | 69,79 | 69,79 | 69,79 | 69,79 | 69,79 | 69,79 | 69,79 | 69,79 | 69,79 |
| V (mL) | 697,89 | 900 | 697,89 | 697,89 | 697,89 | 697,89 | 697,89 | 697,89 | 697,89 | 697,89 | 697,89 |
| $V_L$ (mL) | 689,08 | 889 | 689,08 | 689,08 | 689,08 | 689,08 | 689,08 | 689,08 | 689,08 | 689,08 | 689,08 |
| $V_A$ (mL) | / | 0 | 2 | 5 | 10 | 50 | 75 | 100 | 125 | 150 | 200 |
| $V_B$ (mL) | 5 | 0 | / | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 684,08 | 889 | 687,08 | 684,08 | 679,08 | 639,08 | 614,08 | 589,08 | 564,08 | 539,08 | 489,08 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 11,90 | pH LT | 10,38 | 9,75 | 8,39 | 6,54 | 6,21 | 5,67 | 5,20 | 4,54 | 4,03 |
| pH ($t_{0+44h}$) | 11,81 | | 10,56 | 9,86 | 8,54 | 6,81 | 6,34 | 5,89 | 5,36 | 4,79 | 4,23 |
| pH ($t_{0+48h}$) | 11,78 | 11,63 | 10,51 | 9,74 | 8,51 | 6,84 | 6,32 | 5,86 | 5,31 | 4,75 | 4,34 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\Delta$pH ($t_{0+4h}$)-($t_{0+44h}$) | 0,09 | / | -0,18 | -0,11 | -0,15 | -0,27 | -0,13 | -0,22 | -0,16 | -0,25 | -0,20 |
| $\Delta$pH ($t_{0+44h}$)-($t_{0+48h}$) | 0,03 | | 0,05 | 0,12 | 0,03 | -0,03 | 0,02 | 0,03 | 0,05 | 0,04 | -0,11 |

**LT: Leaching Test without acid or base addition**


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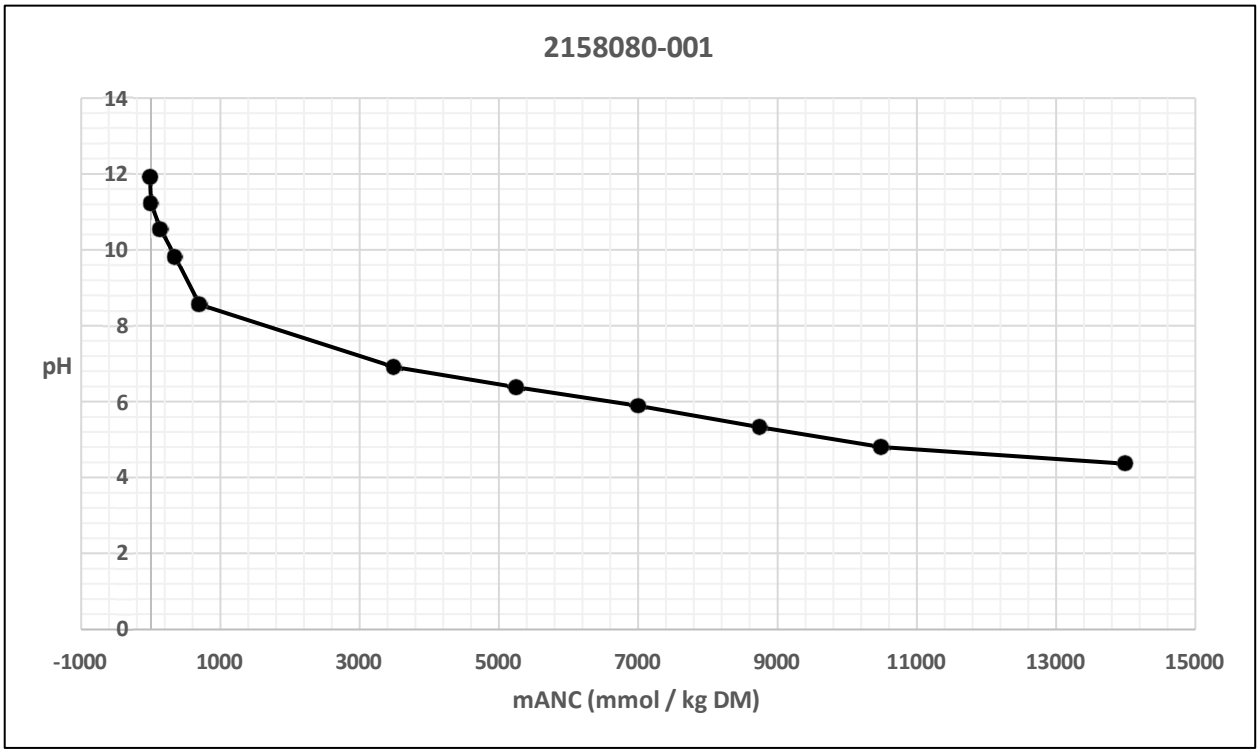


| Laboratory Technical Manager | Laboratory Director |
|---|---|
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Test Report n°: **2158080-002** of: **30/01/2024**

Description: **Waste sample from sampling point named "A1S2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014C-002 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158080**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | 0,17 | mg/kg | 0,03 | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158080-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 813 | mg/kg | 140 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 8,7 | mg/kg | 2,1 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 543 | mg/kg | 94 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 28,6 | mg/kg | 4,6 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 4900 | mg/kg | 390 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN ISO 14402:2004 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 11,2 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,19 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158080-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni<br>*Size reduction method* | | Pestle and mortar | | | | | |
| Frazione maggiore di 4mm (%)<br>*Fraction greater than 4mm (%)* | | 75,2 | | | | | |
| Frazione materiale non macinabile (%)<br>*Non-grind material fraction (%)* | | 0 | | | | | |
| Massa grezza Mw della porzione di prova (kg)<br>*Raw mass Mw of the test portion (kg)* | | 0,1 | | | | | |
| Rapporto del contenuto di umidità MC (%)<br>*MC moisture content ratio (%)* | | 10 | | 2 | | | |
| Data della prova che ha prodotto l'eluato<br>*Date of the test which produced the eluate* | | 29/12/2023 | | | | | |
| Volume agente lisciviante (l)<br>*Leaching agent volume (l)* | | 0,89 | | | | | |
| pH (Unità)<br>*pH (Unit)* | | 11,2 | | 0,1 | | | |
| Conducibilità (µS/cm)<br>*Conductivity (µS/cm)* | - | 833 | | 180 | | | |
| Temperatura (°C)<br>*Temperature (°C)* | | 18,4 | | | | | |

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Continuation of Test Report n°: **2158080-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158080-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".

By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.

By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".

By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".

By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".

"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".

By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".

By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".

By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".

By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".

"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".

"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".

By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".

"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".

By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158080-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158080-002

# Acid Neutralization Capacity

Method: UNI CEN/TS 15364 2006

Test Start Date: 08/01/2024
Test Finish Date: 11/01/2024

| Test | 1 | LT | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HNO3 Concentration (mol / L) | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| HNO3 Volume (mL) | / | / | 2 | 5 | 10 | 50 | 75 | 100 | 125 | 150 | 200 |
| mol HNO3 (A) | 0,0000 | 0 | 0,1399 | 0,3497 | 0,6994 | 3,4970 | 5,2456 | 6,9941 | 8,7426 | 10,4911 | 13,9882 |
| NaOH Concentration (mol / L) | 0,1 | / | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 10 | / | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0140 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0140 | 0 | 0,1399 | 0,3497 | 0,6994 | 3,4970 | 5,2456 | 6,9941 | 8,7426 | 10,4911 | 13,9882 |
| mANC (mmol / kg) | -13,99 | 0 | 139,88 | 349,70 | 699,41 | 3497,04 | 5245,57 | 6994,09 | 8742,61 | 10491,13 | 13988,18 |
| $w_{dr}$ (%) | 90,15 | 90,15 | 90,15 | 90,15 | 90,15 | 90,15 | 90,15 | 90,15 | 90,15 | 90,15 | 90,15 |
| un-dried mass of the test portion (g) | 79,3 | 100 | 79,3 | 79,3 | 79,3 | 79,3 | 79,3 | 79,3 | 79,3 | 79,3 | 79,3 |
| $M_d$ (g) | 71,49 | 90 | 71,49 | 71,49 | 71,49 | 71,49 | 71,49 | 71,49 | 71,49 | 71,49 | 71,49 |
| V (mL) | 714,89 | 900 | 714,89 | 714,89 | 714,89 | 714,89 | 714,89 | 714,89 | 714,89 | 714,89 | 714,89 |
| $V_L$ (mL) | 707,08 | 890 | 707,08 | 707,08 | 707,08 | 707,08 | 707,08 | 707,08 | 707,08 | 707,08 | 707,08 |
| $V_A$ (mL) | / | 0 | 2 | 5 | 10 | 50 | 75 | 100 | 125 | 150 | 200 |
| $V_B$ (mL) | 10 | 0 | / | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 697,08 | 900 | 705,08 | 702,08 | 697,08 | 657,08 | 632,08 | 607,08 | 582,08 | 557,08 | 507,08 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,01 | pH LT | 10,26 | 9,45 | 8,41 | 6,54 | 6,21 | 5,59 | 5,03 | 4,26 | 4,09 |
| pH ($t_{0+44h}$) | 11,95 | | 10,57 | 9,83 | 8,53 | 6,86 | 6,34 | 5,91 | 5,36 | 4,78 | 4,32 |
| pH ($t_{0+48h}$) | 11,92 | 11,22 | 10,55 | 9,81 | 8,56 | 6,91 | 6,38 | 5,89 | 5,33 | 4,80 | 4,37 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\Delta pH$ ($t_{0+4h}$)-($t_{0+44h}$) | 0,06 | / | -0,31 | -0,38 | -0,12 | -0,32 | -0,13 | -0,32 | -0,33 | -0,52 | -0,23 |
| $\Delta pH$ ($t_{0+44h}$)-($t_{0+48h}$) | 0,03 | | 0,02 | 0,02 | -0,03 | -0,05 | -0,04 | 0,02 | 0,03 | -0,02 | -0,05 |

**LT: Leaching Test without acid or base addition**


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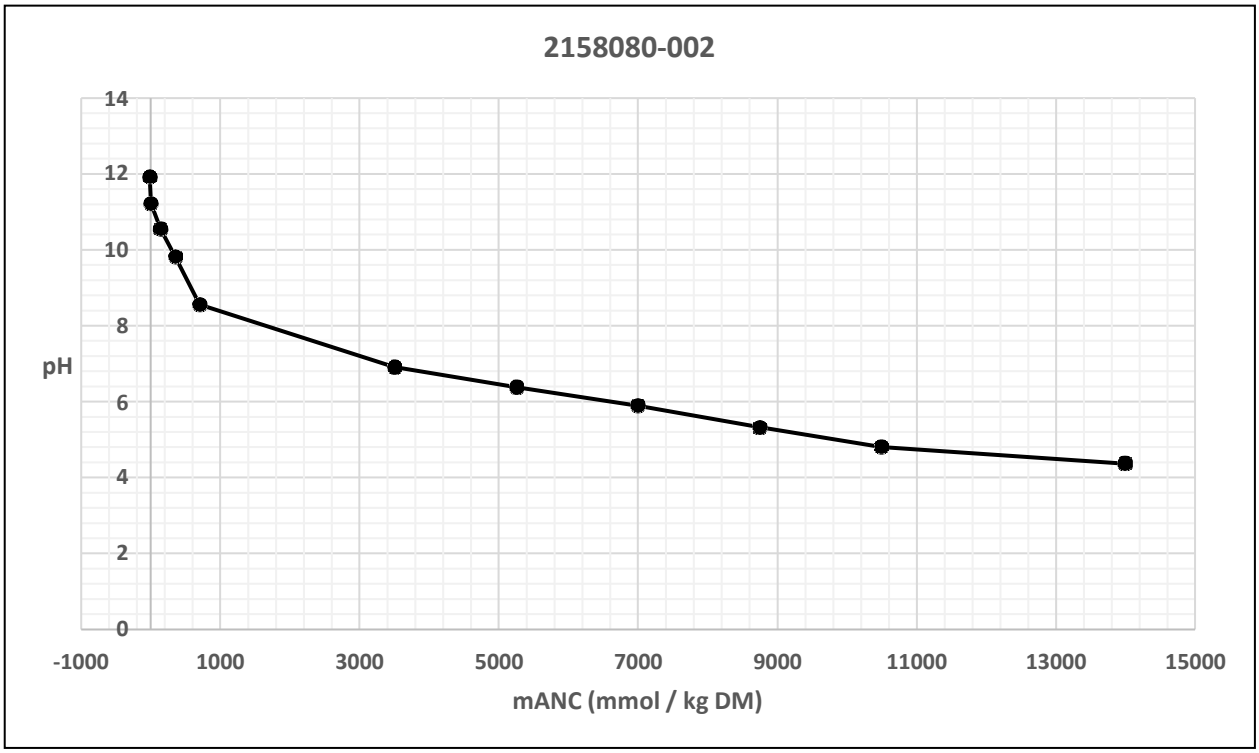


| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** | **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158080-003** of: **30/01/2024**

Description: **Waste sample from sampling point named "A1M1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014C-003 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158080**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | 0,029 | mg/kg | 0,006 | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158080-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 326 | mg/kg | 57 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 12 | mg/kg | 3 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 176 | mg/kg | 31 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 25,8 | mg/kg | 4,2 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 1500 | mg/kg | 120 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN ISO 14402:2004 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 8,8 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,09 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158080-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni<br>*Size reduction method* | | Pestle and mortar | | | | | |
| Frazione maggiore di 4mm (%)<br>*Fraction greater than 4mm (%)* | | 64,3 | | | | | |
| Frazione materiale non macinabile (%)<br>*Non-grind material fraction (%)* | | 0 | | | | | |
| Massa grezza Mw della porzione di prova (kg)<br>*Raw mass Mw of the test portion (kg)* | | 0,103 | | | | | |
| Rapporto del contenuto di umidità MC (%)<br>*MC moisture content ratio (%)* | | 13 | | 2 | | | |
| Data della prova che ha prodotto l'eluato<br>*Date of the test which produced the eluate* | | 29/12/2023 | | | | | |
| Volume agente lisciviante (l)<br>*Leaching agent volume (l)* | | 0,887 | | | | | |
| pH (Unità)<br>*pH (Unit)* | | 8,8 | | 0,1 | | | |
| Conducibilità (µS/cm)<br>*Conductivity (µS/cm)* | - | 265 | | 63 | | | |
| Temperatura (°C)<br>*Temperature (°C)* | | 18,4 | | | | | |

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Continuation of Test Report n°: **2158080-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158080-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".

By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.

By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".

By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".

By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".

"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".

By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".

By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".

By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".

By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".

"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".

"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".

By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".

"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".

By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158080-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158080-003
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Test Start Date: 08/01/2024
Test Finish Date: 11/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HNO3 Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| HNO3 Volume (mL) | / | / | / | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| mol HNO3 (A) | 0,0000 | 0,0000 | 0 | 0,1574 | 0,2361 | 0,3148 | 0,3935 | 0,7869 | 7,0822 | 9,4429 | 11,8036 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0944 | 0,0236 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0944 | -0,0236 | 0 | 0,1574 | 0,2361 | 0,3148 | 0,3935 | 0,7869 | 7,0822 | 9,4429 | 11,8036 |
| mANC (mmol / kg) | -94,43 | -23,61 | 0 | 157,38 | 236,07 | 314,76 | 393,45 | 786,91 | 7082,18 | 9442,90 | 11803,63 |
| $w_{dr}$ (%) | 87,4 | 87,4 | 87,4 | 87,4 | 87,4 | 87,4 | 87,4 | 87,4 | 87,4 | 87,4 | 87,4 |
| un-dried mass of the test portion (g) | 72,7 | 72,7 | 103 | 72,7 | 72,7 | 72,7 | 72,7 | 72,7 | 72,7 | 72,7 | 72,7 |
| $M_d$ (g) | 63,54 | 63,54 | 90 | 63,54 | 63,54 | 63,54 | 63,54 | 63,54 | 63,54 | 63,54 | 63,54 |
| V (mL) | 635,40 | 635,40 | 900 | 635,40 | 635,40 | 635,40 | 635,40 | 635,40 | 635,40 | 635,40 | 635,40 |
| $V_L$ (mL) | 626,24 | 626,24 | 887 | 626,24 | 626,24 | 626,24 | 626,24 | 626,24 | 626,24 | 626,24 | 626,24 |
| $V_A$ (mL) | / | / | 0 | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 566,24 | 611,24 | 887 | 624,24 | 623,24 | 622,24 | 621,24 | 616,24 | 536,24 | 506,24 | 476,24 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ph ($t_{0+4h}$) | 12,00 | 10,50 | pH LT | 8,00 | 7,96 | 7,36 | 6,84 | 6,09 | 5,13 | 4,21 | 3,06 |
| pH ($t_{0+44h}$) | 12,01 | 10,46 | | 8,24 | 8,12 | 7,46 | 7,00 | 6,40 | 5,39 | 4,48 | 3,13 |
| pH ($t_{0+48h}$) | 11,99 | 10,42 | 8,76 | 8,23 | 8,03 | 7,51 | 7,03 | 6,46 | 5,46 | 4,51 | 3,22 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\Delta$pH ($t_{0+4h}$)-($t_{0+44h}$) | -0,01 | 0,04 | / | -0,24 | -0,16 | -0,10 | -0,16 | -0,31 | -0,26 | -0,27 | -0,07 |
| $\Delta$pH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,04 | | 0,01 | 0,09 | -0,05 | -0,03 | -0,06 | -0,07 | -0,03 | -0,09 |

**LT: Leaching Test without acid or base addition**


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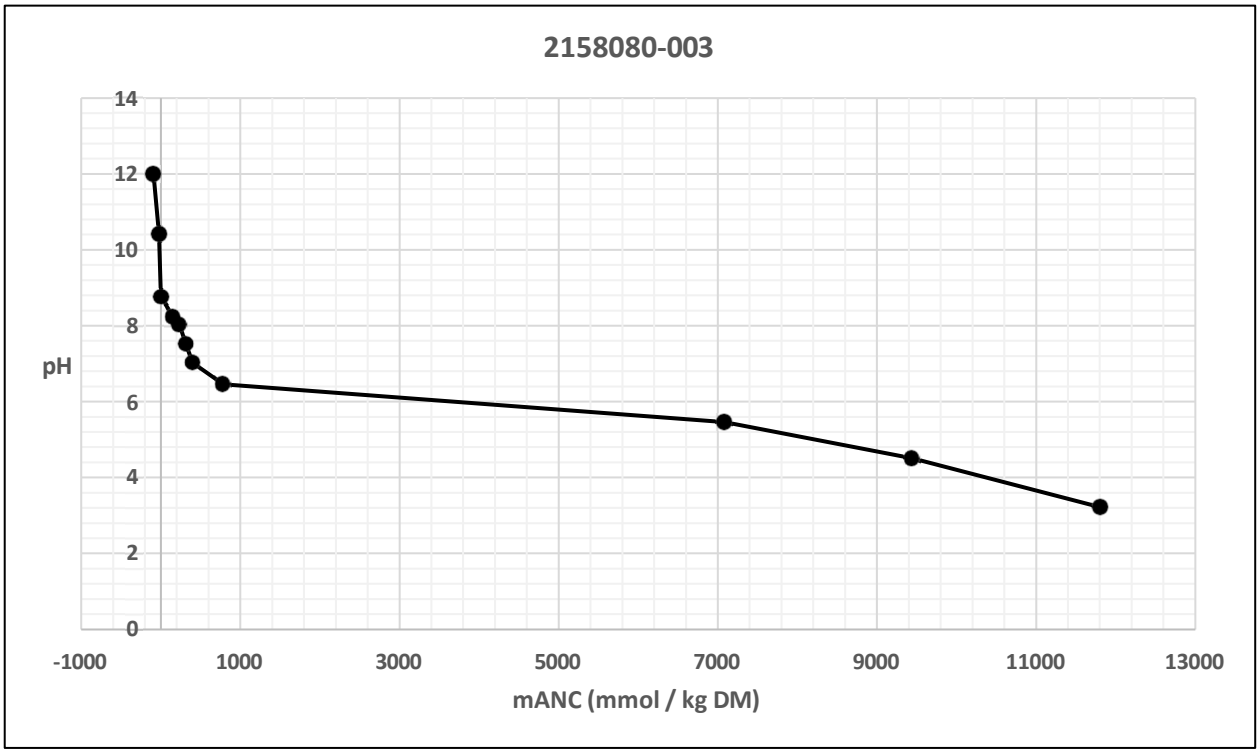


| Laboratory Technical Manager |
| --- |
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
| --- |
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158080-004** of: **30/01/2024**

Description: **Waste sample from sampling point named "A1M2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014C-004 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158080**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | 0,029 | mg/kg | 0,006 | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158080-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | 0,076 | mg/kg | 0,029 | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 280 | mg/kg | 49 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 11,0 | mg/kg | 2,8 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 151 | mg/kg | 26 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 25,5 | mg/kg | 4,1 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 1300 | mg/kg | 100 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN ISO 14402:2004 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 8,8 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,07 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158080-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni<br>*Size reduction method* | | Pestle and mortar | | | | | |
| Frazione maggiore di 4mm (%)<br>*Fraction greater than 4mm (%)* | | 62,5 | | | | | |
| Frazione materiale non macinabile (%)<br>*Non-grind material fraction (%)* | | 0 | | | | | |
| Massa grezza Mw della porzione di prova (kg)<br>*Raw mass Mw of the test portion (kg)* | | 0,103 | | | | | |
| Rapporto del contenuto di umidità MC (%)<br>*MC moisture content ratio (%)* | | 12 | | 2 | | | |
| Data della prova che ha prodotto l'eluato<br>*Date of the test which produced the eluate* | | 29/12/2023 | | | | | |
| Volume agente lisciviante (l)<br>*Leaching agent volume (l)* | | 0,887 | | | | | |
| pH (Unità)<br>*pH (Unit)* | | 8,8 | | 0,1 | | | |
| Conducibilità (µS/cm)<br>*Conductivity (µS/cm)* | - | 231 | | 55 | | | |
| Temperatura (°C)<br>*Temperature (°C)* | | 18,4 | | | | | |

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Continuation of Test Report n°: **2158080-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158080-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".

By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.

By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".

By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".

By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".

"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".

By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".

By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".

By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".

By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".

"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".

"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".

By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".

"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".

By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158080-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158080-004

# Acid Neutralization Capacity

Method: UNI CEN/TS 15364 2006

Test Start Date: 08/01/2024
Test Finish Date: 11/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HNO3 Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| HNO3 Volume (mL) | / | / | / | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| mol HNO3 (A) | 0,0000 | 0,0000 | 0 | 0,1601 | 0,2402 | 0,3202 | 0,4003 | 0,8005 | 7,2047 | 9,6063 | 12,0079 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0961 | 0,0240 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0961 | -0,0240 | 0 | 0,1601 | 0,2402 | 0,3202 | 0,4003 | 0,8005 | 7,2047 | 9,6063 | 12,0079 |
| mANC (mmol / kg) | -96,06 | -24,02 | 0 | 160,11 | 240,16 | 320,21 | 400,26 | 800,53 | 7204,75 | 9606,33 | 12007,92 |
| $w_{dr}$ (%) | 87,6 | 87,6 | 87,6 | 87,6 | 87,6 | 87,6 | 87,6 | 87,6 | 87,6 | 87,6 | 87,6 |
| un-dried mass of the test portion (g) | 71,3 | 71,3 | 103 | 71,3 | 71,3 | 71,3 | 71,3 | 71,3 | 71,3 | 71,3 | 71,3 |
| $M_d$ (g) | 62,46 | 62,46 | 90 | 62,46 | 62,46 | 62,46 | 62,46 | 62,46 | 62,46 | 62,46 | 62,46 |
| V (mL) | 624,59 | 624,59 | 900 | 624,59 | 624,59 | 624,59 | 624,59 | 624,59 | 624,59 | 624,59 | 624,59 |
| $V_L$ (mL) | 615,75 | 615,75 | 887 | 615,75 | 615,75 | 615,75 | 615,75 | 615,75 | 615,75 | 615,75 | 615,75 |
| $V_A$ (mL) | / | / | 0 | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 555,75 | 600,75 | 887 | 613,75 | 612,75 | 611,75 | 610,75 | 605,75 | 525,75 | 495,75 | 465,75 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,01 | 10,52 | pH LT | 8,01 | 7,97 | 7,39 | 6,87 | 6,11 | 5,16 | 4,23 | 3,11 |
| pH ($t_{0+44h}$) | 12,02 | 10,47 | | 8,26 | 8,13 | 7,47 | 7,03 | 6,41 | 5,41 | 4,56 | 3,16 |
| pH ($t_{0+48h}$) | 12,00 | 10,44 | 8,81 | 8,24 | 8,04 | 7,53 | 7,06 | 6,47 | 5,47 | 4,58 | 3,26 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\Delta pH$ ($t_{0+4h}$)-($t_{0+44h}$) | -0,01 | 0,05 | / | -0,25 | -0,16 | -0,08 | -0,16 | -0,30 | -0,25 | -0,33 | -0,05 |
| $\Delta pH$ ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,03 | | 0,02 | 0,09 | -0,06 | -0,03 | -0,06 | -0,06 | -0,02 | -0,10 |

**LT: Leaching Test without acid or base addition**


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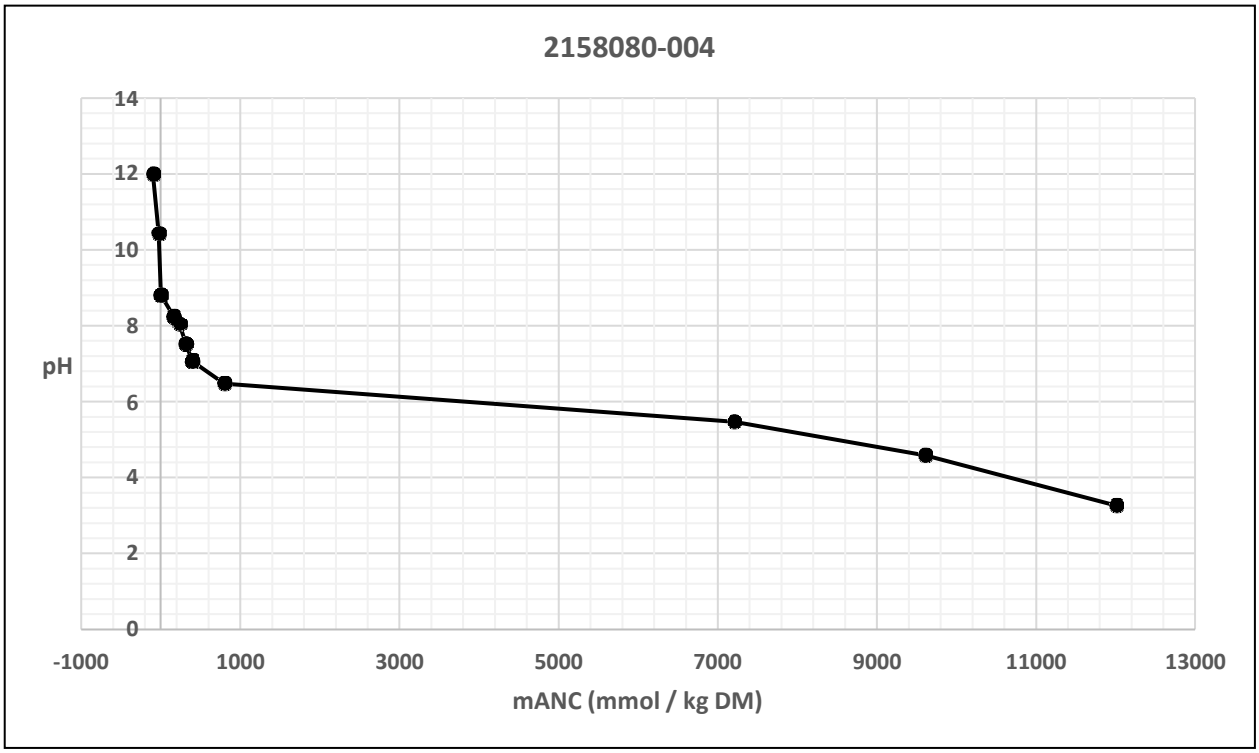


| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** | **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158080-005** of: **30/01/2024**

Description: **Waste sample from sampling point named "D1S1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014C-005 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158080**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **11-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158080-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 301 | mg/kg | 52 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 7,4 | mg/kg | 1,8 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 353 | mg/kg | 61 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 48,4 | mg/kg | 7,8 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 1700 | mg/kg | 140 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN ISO 14402:2004 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 8,8 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,16 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158080-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni<br>*Size reduction method* | | Pestle and mortar | | | | | |
| Frazione maggiore di 4mm (%)<br>*Fraction greater than 4mm (%)* | | 52,5 | | | | | |
| Frazione materiale non macinabile (%)<br>*Non-grind material fraction (%)* | | 0 | | | | | |
| Massa grezza Mw della porzione di prova (kg)<br>*Raw mass Mw of the test portion (kg)* | | 0,098 | | | | | |
| Rapporto del contenuto di umidità MC (%)<br>*MC moisture content ratio (%)* | | 8 | | 1 | | | |
| Data della prova che ha prodotto l'eluato<br>*Date of the test which produced the eluate* | | 29/12/2023 | | | | | |
| Volume agente lisciviante (l)<br>*Leaching agent volume (l)* | | 0,892 | | | | | |
| pH (Unità)<br>*pH (Unit)* | | 8,8 | | 0,1 | | | |
| Conducibilità (µS/cm)<br>*Conductivity (µS/cm)* | - | 295 | | 70 | | | |
| Temperatura (°C)<br>*Temperature (°C)* | | 18,4 | | | | | |

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Continuation of Test Report n°: **2158080-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158080-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".

By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.

By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".

By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".

By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".

"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".

By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".

By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".

By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".

By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".

"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".

"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".

By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".

"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".

By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158080-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158080-005

# Acid Neutralization Capacity

Method: UNI CEN/TS 15364 2006

Test Start Date: 08/01/2024
Test Finish Date: 11/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HNO3 Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| HNO3 Volume (mL) | / | / | / | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| mol HNO3 (A) | 0,0000 | 0,0000 | 0 | 0,1410 | 0,2115 | 0,2820 | 0,3525 | 0,7050 | 6,3449 | 8,4599 | 10,5749 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0846 | 0,0211 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0846 | -0,0211 | 0 | 0,1410 | 0,2115 | 0,2820 | 0,3525 | 0,7050 | 6,3449 | 8,4599 | 10,5749 |
| mANC (mmol / kg) | -84,60 | -21,15 | 0 | 141,00 | 211,50 | 282,00 | 352,50 | 704,99 | 6344,93 | 8459,91 | 10574,89 |
| $w_{dr}$ (%) | 91,75 | 91,75 | 91,75 | 91,75 | 91,75 | 91,75 | 91,75 | 91,75 | 91,75 | 91,75 | 91,75 |
| un-dried mass of the test portion (g) | 77,3 | 77,3 | 98 | 77,3 | 77,3 | 77,3 | 77,3 | 77,3 | 77,3 | 77,3 | 77,3 |
| $M_d$ (g) | 70,92 | 70,92 | 90 | 70,92 | 70,92 | 70,92 | 70,92 | 70,92 | 70,92 | 70,92 | 70,92 |
| V (mL) | 709,23 | 709,23 | 900 | 709,23 | 709,23 | 709,23 | 709,23 | 709,23 | 709,23 | 709,23 | 709,23 |
| $V_L$ (mL) | 702,85 | 702,85 | 892 | 702,85 | 702,85 | 702,85 | 702,85 | 702,85 | 702,85 | 702,85 | 702,85 |
| $V_A$ (mL) | / | / | 0 | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 642,85 | 687,85 | 892 | 700,85 | 699,85 | 698,85 | 697,85 | 692,85 | 612,85 | 582,85 | 552,85 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,00 | 10,50 | pH LT | 8,16 | 7,90 | 7,43 | 6,67 | 6,09 | 5,33 | 4,26 | 3,16 |
| pH ($t_{0+44h}$) | 12,00 | 10,49 | | 8,26 | 8,15 | 7,63 | 7,09 | 6,59 | 5,59 | 4,59 | 3,50 |
| pH ($t_{0+48h}$) | 12,00 | 10,50 | 8,76 | 8,27 | 8,13 | 7,61 | 7,11 | 6,56 | 5,57 | 4,61 | 3,52 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\Delta pH$ ($t_{0+4h}$)-($t_{0+44h}$) | 0,00 | 0,01 | / | -0,10 | -0,25 | -0,20 | -0,42 | -0,50 | -0,26 | -0,33 | -0,34 |
| $\Delta pH$ ($t_{0+44h}$)-($t_{0+48h}$) | 0,00 | -0,01 | | -0,01 | 0,02 | 0,02 | -0,02 | 0,03 | 0,02 | -0,02 | -0,02 |

**LT: Leaching Test without acid or base addition**


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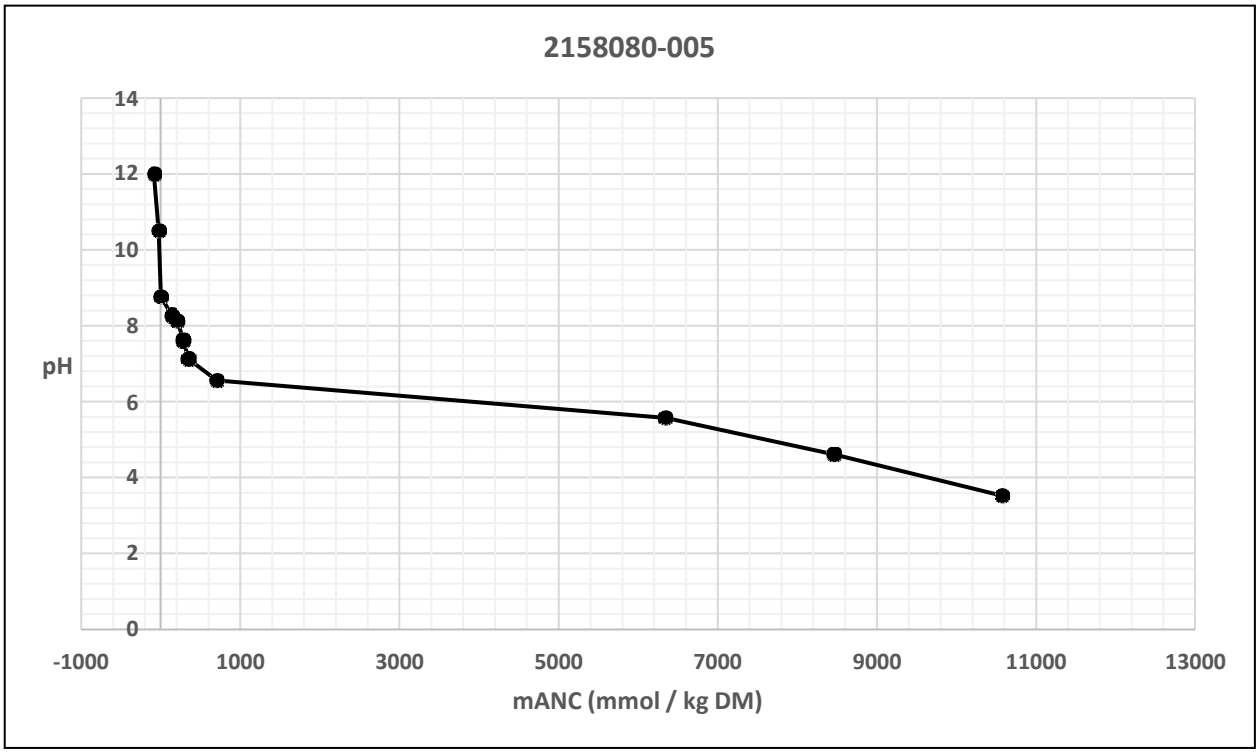


| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** | **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158080-006** of: **30/01/2024**

Description: **Waste sample from sampling point named "D1S2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014C-006 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158080**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **18-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | 0,15 | mg/kg | 0,03 | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158080-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | 0,25 | mg/kg | 0,06 | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 330 | mg/kg | 57 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 9,1 | mg/kg | 2,2 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 348 | mg/kg | 61 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 51,6 | mg/kg | 8,3 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 1800 | mg/kg | 140 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN ISO 14402:2004 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,2 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,23 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158080-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 47,5 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,098 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 8 | | 1 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 29/12/2023 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,892 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 9,2 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 305 | | 72 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,4 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158080-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158080-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".

By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.

By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".

By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".

By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".

"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".

By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".

By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".

By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".

By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".

"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".

"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".

By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".

"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".

By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158080-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158080-006
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Test Start Date: 15/01/2024
Test Finish Date: 18/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | 0 | 0,1528 | 0,2292 | 0,3056 | 0,3820 | 0,7641 | 6,8766 | 9,1688 | 11,4610 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 5 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0917 | 0,0076 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0917 | -0,0076 | 0 | 0,1528 | 0,2292 | 0,3056 | 0,3820 | 0,7641 | 6,8766 | 9,1688 | 11,4610 |
| mANC (mmol / kg) | -91,69 | -7,64 | 0 | 152,81 | 229,22 | 305,63 | 382,03 | 764,07 | 6876,62 | 9168,82 | 11461,03 |
| $w_{dr}$ (%) | 91,78 | 91,78 | 91,78 | 91,78 | 91,78 | 91,78 | 91,78 | 91,78 | 91,78 | 91,78 | 91,78 |
| un-dried mass of the test portion (g) | 71,3 | 71,3 | 98 | 71,3 | 71,3 | 71,3 | 71,3 | 71,3 | 71,3 | 71,3 | 71,3 |
| $M_d$ (g) | 65,44 | 65,44 | 90 | 65,44 | 65,44 | 65,44 | 65,44 | 65,44 | 65,44 | 65,44 | 65,44 |
| V (mL) | 654,39 | 654,39 | 900 | 654,39 | 654,39 | 654,39 | 654,39 | 654,39 | 654,39 | 654,39 | 654,39 |
| $V_L$ (mL) | 648,53 | 648,53 | 892 | 648,53 | 648,53 | 648,53 | 648,53 | 648,53 | 648,53 | 648,53 | 648,53 |
| $V_A$ (mL) | / | / | 0 | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| $V_B$ (mL) | 60 | 5 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 588,53 | 643,53 | 892 | 646,53 | 645,53 | 644,53 | 643,53 | 638,53 | 558,53 | 528,53 | 498,53 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,00 | 11,12 | pH LT | 7,90 | 7,35 | 7,20 | 6,87 | 6,33 | 5,21 | 4,16 | 3,06 |
| pH ($t_{0+44h}$) | 11,67 | 10,74 | | 8,36 | 8,06 | 7,49 | 7,06 | 6,58 | 5,74 | 4,60 | 3,23 |
| pH ($t_{0+48h}$) | 11,65 | 10,70 | 9,20 | 8,33 | 8,01 | 7,51 | 7,10 | 6,60 | 5,75 | 4,63 | 3,19 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,33 | 0,38 | / | -0,46 | -0,71 | -0,29 | -0,19 | -0,25 | -0,53 | -0,44 | -0,17 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,04 | | 0,03 | 0,05 | -0,02 | -0,04 | -0,02 | -0,01 | -0,03 | 0,04 |

**LT: Leaching Test without acid or base addition**


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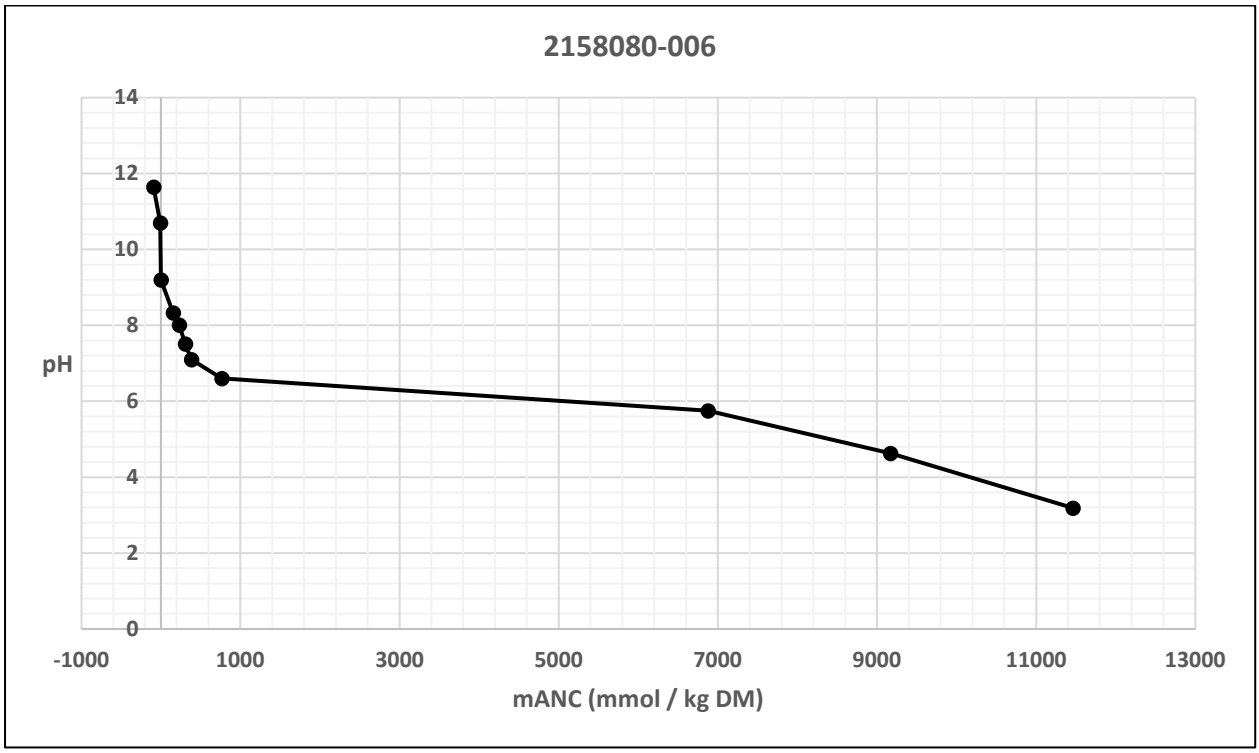


| Laboratory Technical Manager |
| --- |
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
| --- |
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158080-007** of: **30/01/2024**

Description: **Waste sample from sampling point named "D1M1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014C-007 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158080**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **18-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | 0,11 | mg/kg | 0,03 | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158080-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | 2,3 | mg/kg | 0,4 | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | 1,4 | mg/kg | 0,4 | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 295 | mg/kg | 51 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 7,2 | mg/kg | 1,8 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 335 | mg/kg | 58 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 55,7 | mg/kg | 9,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 1900 | mg/kg | 150 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN ISO 14402:2004 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,0 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,25 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158080-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 41,9 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,097 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 7 | | 1 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 29/12/2023 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,893 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 9,0 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 318 | | 75 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,4 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158080-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158080-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".

By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.

By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".

By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".

By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".

"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".

By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".

By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".

By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".

By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".

"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".

"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".

By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".

"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".

By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158080-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158080-007

# Acid Neutralization Capacity

Method: UNI CEN/TS 15364 2006

Test Start Date: 15/01/2024
Test Finish Date: 18/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HNO3 Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| HNO3 Volume (mL) | / | / | / | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| mol HNO3 (A) | 0,0000 | 0,0000 | 0 | 0,1490 | 0,2234 | 0,2979 | 0,3724 | 0,7448 | 6,7035 | 8,9380 | 11,1725 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 5 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0894 | 0,0074 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0894 | -0,0074 | 0 | 0,1490 | 0,2234 | 0,2979 | 0,3724 | 0,7448 | 6,7035 | 8,9380 | 11,1725 |
| mANC (mmol / kg) | -89,38 | -7,45 | 0 | 148,97 | 223,45 | 297,93 | 372,42 | 744,83 | 6703,48 | 8937,98 | 11172,47 |
| $w_{dr}$ (%) | 92,72 | 92,72 | 92,72 | 92,72 | 92,72 | 92,72 | 92,72 | 92,72 | 92,72 | 92,72 | 92,72 |
| un-dried mass of the test portion (g) | 72,4 | 72,4 | 97 | 72,4 | 72,4 | 72,4 | 72,4 | 72,4 | 72,4 | 72,4 | 72,4 |
| $M_d$ (g) | 67,13 | 67,13 | 90 | 67,13 | 67,13 | 67,13 | 67,13 | 67,13 | 67,13 | 67,13 | 67,13 |
| V (mL) | 671,29 | 671,29 | 900 | 671,29 | 671,29 | 671,29 | 671,29 | 671,29 | 671,29 | 671,29 | 671,29 |
| $V_L$ (mL) | 666,02 | 666,02 | 893 | 666,02 | 666,02 | 666,02 | 666,02 | 666,02 | 666,02 | 666,02 | 666,02 |
| $V_A$ (mL) | / | / | 0 | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| $V_B$ (mL) | 60 | 5 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 606,02 | 661,02 | 893 | 664,02 | 663,02 | 662,02 | 661,02 | 656,02 | 576,02 | 546,02 | 516,02 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,03 | 10,90 | pH LT | 8,06 | 7,84 | 7,39 | 7,00 | 6,34 | 5,33 | 4,21 | 3,06 |
| pH ($t_{0+44h}$) | 11,88 | 10,65 | | 8,24 | 7,95 | 7,46 | 7,05 | 6,42 | 5,48 | 4,48 | 3,12 |
| pH ($t_{0+48h}$) | 11,86 | 10,61 | 9,03 | 8,23 | 7,92 | 7,40 | 7,01 | 6,43 | 5,51 | 4,50 | 3,18 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\Delta$pH ($t_{0+4h}$)-($t_{0+44h}$) | 0,15 | 0,25 | / | -0,18 | -0,11 | -0,07 | -0,05 | -0,08 | -0,15 | -0,27 | -0,06 |
| $\Delta$pH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,04 | | 0,01 | 0,03 | 0,06 | 0,04 | -0,01 | -0,03 | -0,02 | -0,06 |

**LT: Leaching Test without acid or base addition**


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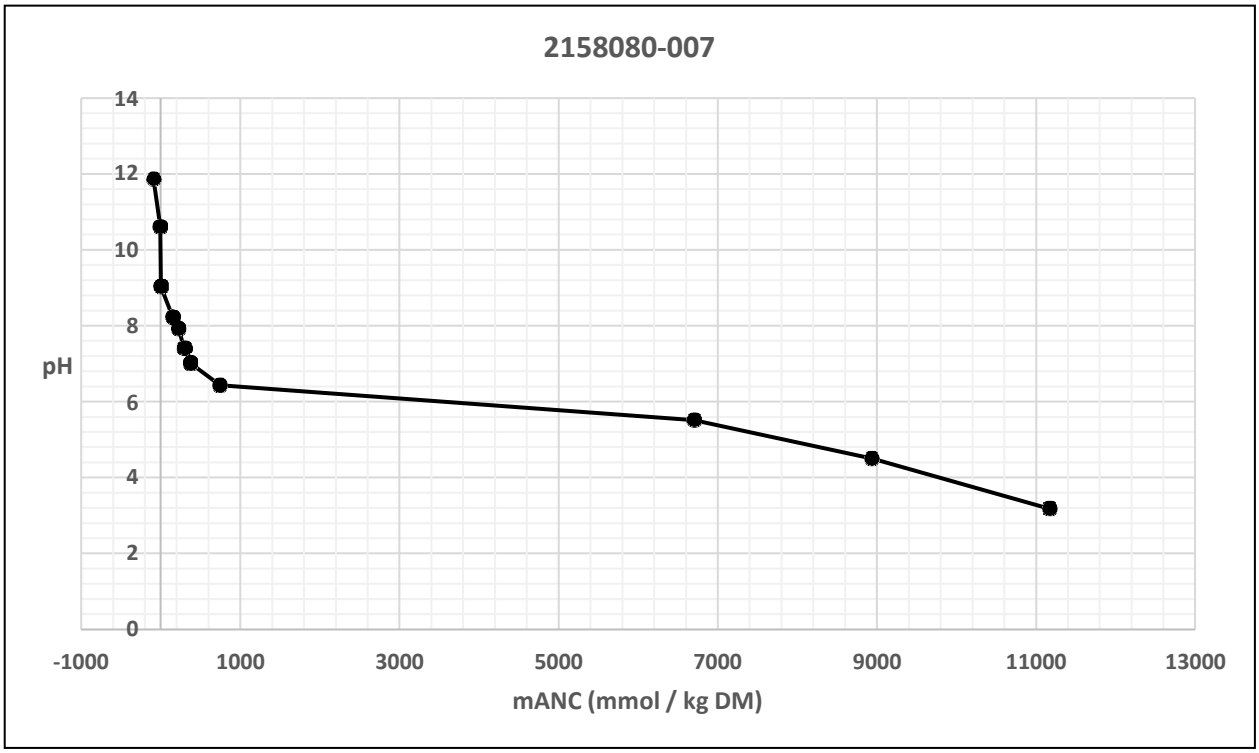


| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** | **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158080-008** of: **30/01/2024**

Description: **Waste sample from sampling point named "D1M2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014C-008 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158080**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **18-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | 0,063 | mg/kg | 0,018 | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158080-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | 0,27 | mg/kg | 0,06 | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 628 | mg/kg | 110 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 6,9 | mg/kg | 1,7 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 463 | mg/kg | 81 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 58,9 | mg/kg | 9,5 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 3800 | mg/kg | 300 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN ISO 14402:2004 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 11,1 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,29 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158080-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni<br>*Size reduction method* | | Pestle and mortar | | | | | |
| Frazione maggiore di 4mm (%)<br>*Fraction greater than 4mm (%)* | | 75 | | | | | |
| Frazione materiale non macinabile (%)<br>*Non-grind material fraction (%)* | | 0 | | | | | |
| Massa grezza Mw della porzione di prova (kg)<br>*Raw mass Mw of the test portion (kg)* | | 0,096 | | | | | |
| Rapporto del contenuto di umidità MC (%)<br>*MC moisture content ratio (%)* | | 6,0 | | 0,9 | | | |
| Data della prova che ha prodotto l'eluato<br>*Date of the test which produced the eluate* | | 29/12/2023 | | | | | |
| Volume agente lisciviante (l)<br>*Leaching agent volume (l)* | | 0,894 | | | | | |
| pH (Unità)<br>*pH (Unit)* | | 11,1 | | 0,1 | | | |
| Conducibilità (µS/cm)<br>*Conductivity (µS/cm)* | - | 635 | | 150 | | | |
| Temperatura (°C)<br>*Temperature (°C)* | | 18,4 | | | | | |

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Continuation of Test Report n°: **2158080-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158080-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158080-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158080-008

# Acid Neutralization Capacity

Method: UNI CEN/TS 15364 2006

Test Start Date: 15/01/2024
Test Finish Date: 18/01/2024

| Test | 1 | LT | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HNO3 Concentration (mol / L) | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| HNO3 Volume (mL) | / | / | 2 | 5 | 10 | 50 | 75 | 100 | 125 | 150 | 200 |
| mol HNO3 (A) | 0,0000 | 0 | 0,1448 | 0,3619 | 0,7238 | 3,6192 | 5,4289 | 7,2385 | 9,0481 | 10,8577 | 14,4770 |
| NaOH Concentration (mol / L) | 0,1 | / | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 10 | / | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0145 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0145 | 0 | 0,1448 | 0,3619 | 0,7238 | 3,6192 | 5,4289 | 7,2385 | 9,0481 | 10,8577 | 14,4770 |
| mANC (mmol / kg) | -14,48 | 0 | 144,77 | 361,92 | 723,85 | 3619,24 | 5428,86 | 7238,48 | 9048,10 | 10857,72 | 14476,95 |
| $w_{dr}$ (%) | 93,98 | 93,98 | 93,98 | 93,98 | 93,98 | 93,98 | 93,98 | 93,98 | 93,98 | 93,98 | 93,98 |
| un-dried mass of the test portion (g) | 73,5 | 94 | 73,5 | 73,5 | 73,5 | 73,5 | 73,5 | 73,5 | 73,5 | 73,5 | 73,5 |
| $M_d$ (g) | 69,08 | 90 | 69,08 | 69,08 | 69,08 | 69,08 | 69,08 | 69,08 | 69,08 | 69,08 | 69,08 |
| V (mL) | 690,75 | 90 | 690,75 | 690,75 | 690,75 | 690,75 | 690,75 | 690,75 | 690,75 | 690,75 | 690,75 |
| $V_L$ (mL) | 686,33 | 896 | 686,33 | 686,33 | 686,33 | 686,33 | 686,33 | 686,33 | 686,33 | 686,33 | 686,33 |
| $V_A$ (mL) | / | 0 | 2 | 5 | 10 | 50 | 75 | 100 | 125 | 150 | 200 |
| $V_B$ (mL) | 10 | 0 | / | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 676,33 | 896 | 684,33 | 681,33 | 676,33 | 636,33 | 611,33 | 586,33 | 561,33 | 536,33 | 486,33 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 11,90 | pH LT | 10,39 | 9,09 | 8,06 | 6,29 | 5,87 | 5,39 | 5,01 | 4,31 | 3,98 |
| pH ($t_{0+44h}$) | 11,86 | | 10,26 | 9,11 | 8,35 | 6,60 | 6,16 | 5,71 | 5,16 | 4,58 | 4,23 |
| pH ($t_{0+48h}$) | 11,81 | 11,08 | 10,23 | 9,07 | 8,31 | 6,61 | 6,11 | 5,71 | 5,13 | 4,56 | 4,21 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,04 | / | 0,13 | -0,02 | -0,29 | -0,31 | -0,29 | -0,32 | -0,15 | -0,27 | -0,25 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,05 | | 0,03 | 0,04 | 0,04 | -0,01 | 0,05 | 0,00 | 0,03 | 0,02 | 0,02 |

**LT: Leaching Test without acid or base addition**


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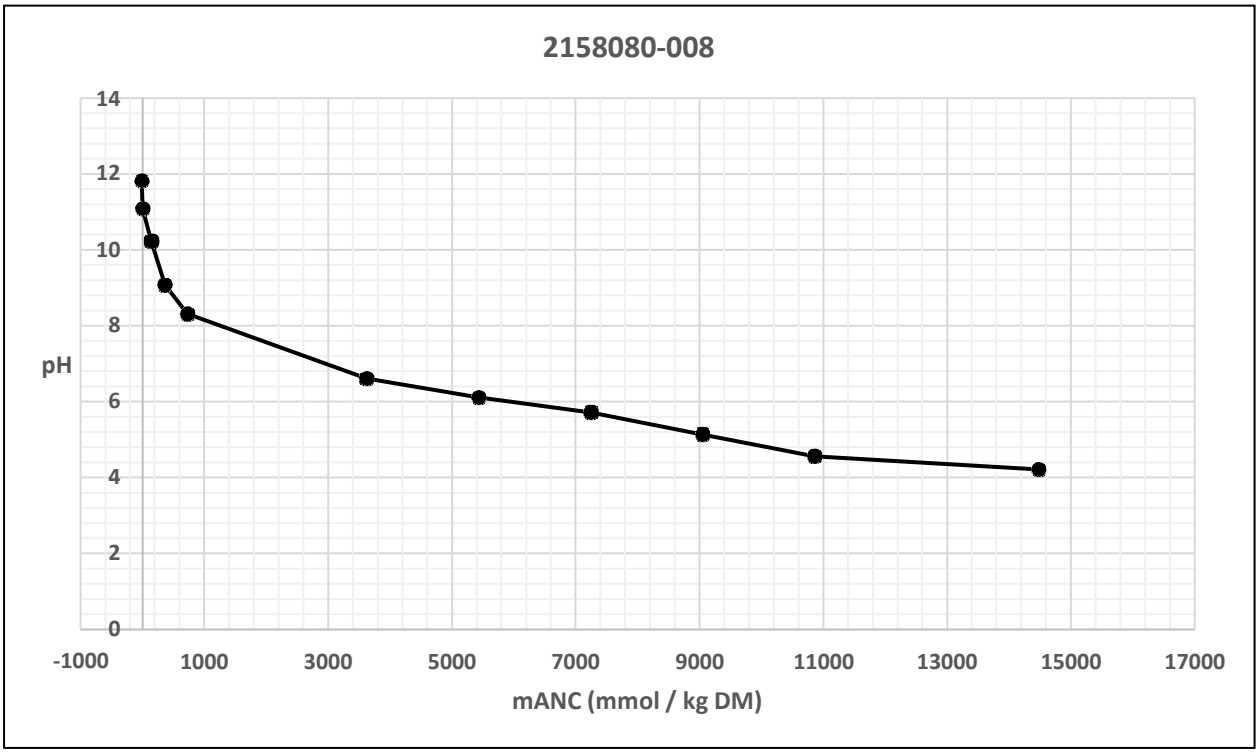


| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** | **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158080-009** of: **30/01/2024**

Description: **Waste sample from sampling point named "D1D1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014C-009 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158080**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **18-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158080-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 362 | mg/kg | 63 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 5,6 | mg/kg | 1,4 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 363 | mg/kg | 63 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 31,6 | mg/kg | 5,1 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 2000 | mg/kg | 160 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN ISO 14402:2004 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 8,6 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,12 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158080-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 43,7 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,095 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 4,9 | | 0,7 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 29/12/2023 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,895 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 8,6 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 338 | | 80 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,4 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158080-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158080-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158080-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158080-009
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Test Start Date: 15/01/2024
Test Finish Date: 18/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HNO3 Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| HNO3 Volume (mL) | / | / | / | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| mol HNO3 (A) | 0,0000 | 0,0000 | 0 | 0,1557 | 0,2336 | 0,3114 | 0,3893 | 0,7786 | 7,0072 | 9,3430 | 11,6787 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0934 | 0,0234 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0934 | -0,0234 | 0 | 0,1557 | 0,2336 | 0,3114 | 0,3893 | 0,7786 | 7,0072 | 9,3430 | 11,6787 |
| mANC (mmol / kg) | -93,43 | -23,36 | 0 | 155,72 | 233,57 | 311,43 | 389,29 | 778,58 | 7007,22 | 9342,96 | 11678,70 |
| $w_{dr}$ (%) | 95,14 | 95,14 | 95,14 | 95,14 | 95,14 | 95,14 | 95,14 | 95,14 | 95,14 | 95,14 | 95,14 |
| un-dried mass of the test portion (g) | 67,5 | 67,5 | 95 | 67,5 | 67,5 | 67,5 | 67,5 | 67,5 | 67,5 | 67,5 | 67,5 |
| $M_d$ (g) | 64,22 | 64,22 | 90 | 64,22 | 64,22 | 64,22 | 64,22 | 64,22 | 64,22 | 64,22 | 64,22 |
| V (mL) | 642,20 | 642,20 | 900 | 642,20 | 642,20 | 642,20 | 642,20 | 642,20 | 642,20 | 642,20 | 642,20 |
| $V_L$ (mL) | 638,91 | 638,91 | 895 | 638,91 | 638,91 | 638,91 | 638,91 | 638,91 | 638,91 | 638,91 | 638,91 |
| $V_A$ (mL) | / | / | 0 | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 578,91 | 623,91 | 895 | 636,91 | 635,91 | 634,91 | 633,91 | 628,91 | 548,91 | 518,91 | 488,91 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,07 | 11,14 | pH LT | 7,77 | 7,60 | 7,18 | 6,64 | 6,05 | 5,06 | 4,11 | 3,03 |
| pH ($t_{0+44h}$) | 11,90 | 10,37 | | 8,14 | 7,99 | 7,38 | 6,81 | 6,31 | 5,30 | 4,38 | 3,14 |
| pH ($t_{0+48h}$) | 11,88 | 10,33 | 8,64 | 8,11 | 7,94 | 7,40 | 6,87 | 6,38 | 5,37 | 4,42 | 3,10 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\Delta$pH ($t_{0+4h}$)-($t_{0+44h}$) | 0,17 | 0,77 | / | -0,37 | -0,39 | -0,20 | -0,17 | -0,26 | -0,24 | -0,27 | -0,11 |
| $\Delta$pH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,04 | | 0,03 | 0,05 | -0,02 | -0,06 | -0,07 | -0,07 | -0,04 | 0,04 |

**LT: Leaching Test without acid or base addition**


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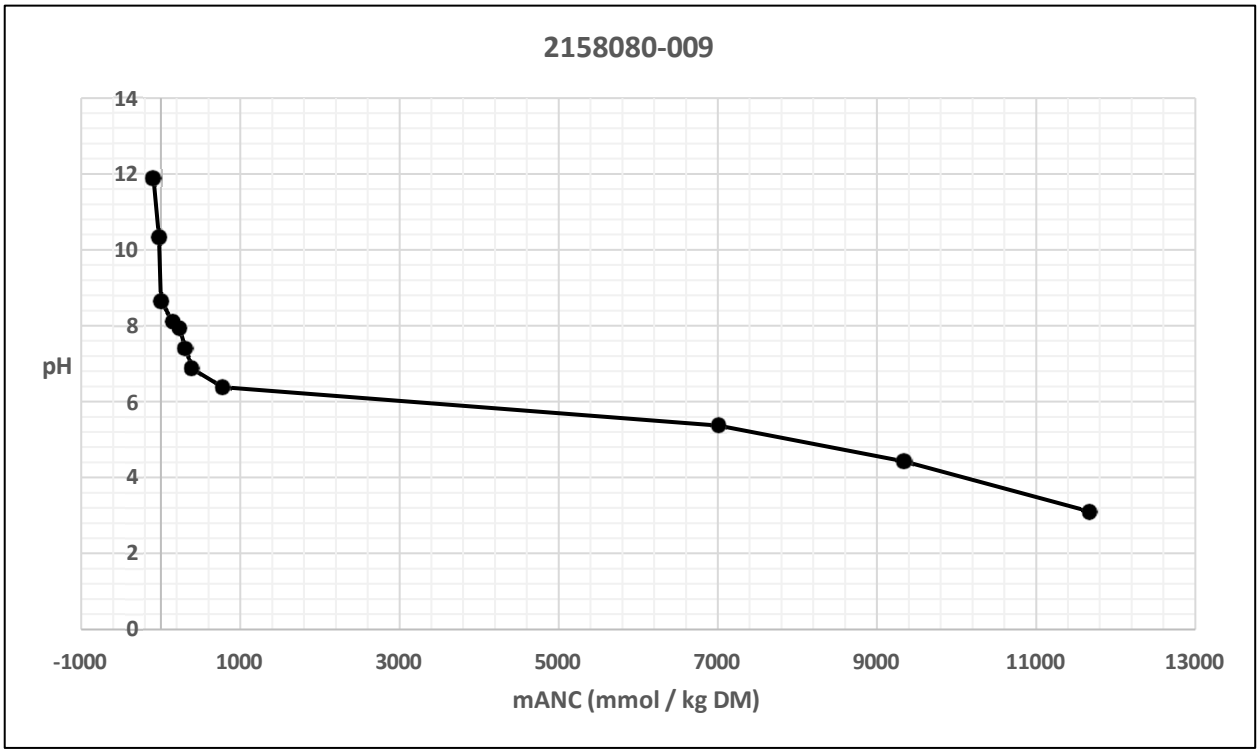


| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** | **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158080-010** of: **30/01/2024**

Description: **Waste sample from sampling point named "D1D2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID SunLab 2023012014C-010 Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158080**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **14-dic-23**

Sample Reception Date: **21-dic-23**

Test Start Date: **21-dic-23** Test Finish Date: **18-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158080-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 305 | mg/kg | 53 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 5,3 | mg/kg | 1,3 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 283 | mg/kg | 49 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 24,2 | mg/kg | 3,9 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 1600 | mg/kg | 130 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN ISO 14402:2004 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 8,5 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,16 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158080-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni<br>*Size reduction method* | | Pestle and mortar | | | | | |
| Frazione maggiore di 4mm (%)<br>*Fraction greater than 4mm (%)* | | 40,1 | | | | | |
| Frazione materiale non macinabile (%)<br>*Non-grind material fraction (%)* | | 0 | | | | | |
| Massa grezza Mw della porzione di prova (kg)<br>*Raw mass Mw of the test portion (kg)* | | 0,094 | | | | | |
| Rapporto del contenuto di umidità MC (%)<br>*MC moisture content ratio (%)* | | 4,3 | | 0,7 | | | |
| Data della prova che ha prodotto l'eluato<br>*Date of the test which produced the eluate* | | 29/12/2023 | | | | | |
| Volume agente lisciviante (l)<br>*Leaching agent volume (l)* | | 0,896 | | | | | |
| pH (Unità)<br>*pH (Unit)* | | 8,5 | | 0,1 | | | |
| Conducibilità (µS/cm)<br>*Conductivity (µS/cm)* | | 281 | | 66 | | | |
| Temperatura (°C)<br>*Temperature (°C)* | | 18,4 | | | | | |

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Continuation of Test Report n°: **2158080-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158080-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".

By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.

By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".

By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".

By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".

"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".

By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".

By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".

By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".

By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".

"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".

"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".

By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".

"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".

By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158080-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158080-010

# Acid Neutralization Capacity

Method: UNI CEN/TS 15364 2006

Test Start Date: 15/01/2024
Test Finish Date: 18/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HNO3 Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| HNO3 Volume (mL) | / | / | / | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| mol HNO3 (A) | 0,0000 | 0,0000 | 0 | 0,1501 | 0,2252 | 0,3003 | 0,3754 | 0,7507 | 6,7567 | 9,0090 | 11,2612 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0901 | 0,0225 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0901 | -0,0225 | 0 | 0,1501 | 0,2252 | 0,3003 | 0,3754 | 0,7507 | 6,7567 | 9,0090 | 11,2612 |
| mANC (mmol / kg) | -90,09 | -22,52 | 0 | 150,15 | 225,22 | 300,30 | 375,37 | 750,75 | 6756,73 | 9008,98 | 11261,22 |
| $w_{dr}$ (%) | 95,69 | 95,69 | 95,69 | 95,69 | 95,69 | 95,69 | 95,69 | 95,69 | 95,69 | 95,69 | 95,69 |
| un-dried mass of the test portion (g) | 69,6 | 69,6 | 94 | 69,6 | 69,6 | 69,6 | 69,6 | 69,6 | 69,6 | 69,6 | 69,6 |
| $M_d$ (g) | 66,60 | 66,60 | 90 | 66,60 | 66,60 | 66,60 | 66,60 | 66,60 | 66,60 | 66,60 | 66,60 |
| V (mL) | 666,00 | 666,00 | 900 | 666,00 | 666,00 | 666,00 | 666,00 | 666,00 | 666,00 | 666,00 | 666,00 |
| $V_L$ (mL) | 663,00 | 663,00 | 896 | 663,00 | 663,00 | 663,00 | 663,00 | 663,00 | 663,00 | 663,00 | 663,00 |
| $V_A$ (mL) | / | / | 0 | 2 | 3 | 4 | 5 | 10 | 90 | 120 | 150 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 603,00 | 648,00 | 896 | 661,00 | 660,00 | 659,00 | 658,00 | 653,00 | 573,00 | 543,00 | 513,00 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,11 | 11,17 | pH LT | 8,08 | 8,01 | 7,46 | 7,03 | 6,84 | 5,89 | 4,98 | 3,96 |
| pH ($t_{0+44h}$) | 11,87 | 10,98 | | 8,31 | 8,13 | 7,79 | 7,33 | 7,09 | 5,98 | 5,06 | 4,00 |
| pH ($t_{0+48h}$) | 11,85 | 10,90 | 8,49 | 8,31 | 8,06 | 7,77 | 7,35 | 7,13 | 6,03 | 5,11 | 4,08 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\Delta pH$ ($t_{0+4h}$)-($t_{0+44h}$) | 0,24 | 0,19 | / | -0,23 | -0,12 | -0,33 | -0,30 | -0,25 | -0,09 | -0,08 | -0,04 |
| $\Delta pH$ ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,08 | | 0,00 | 0,07 | 0,02 | -0,02 | -0,04 | -0,05 | -0,05 | -0,08 |

**LT: Leaching Test without acid or base addition**


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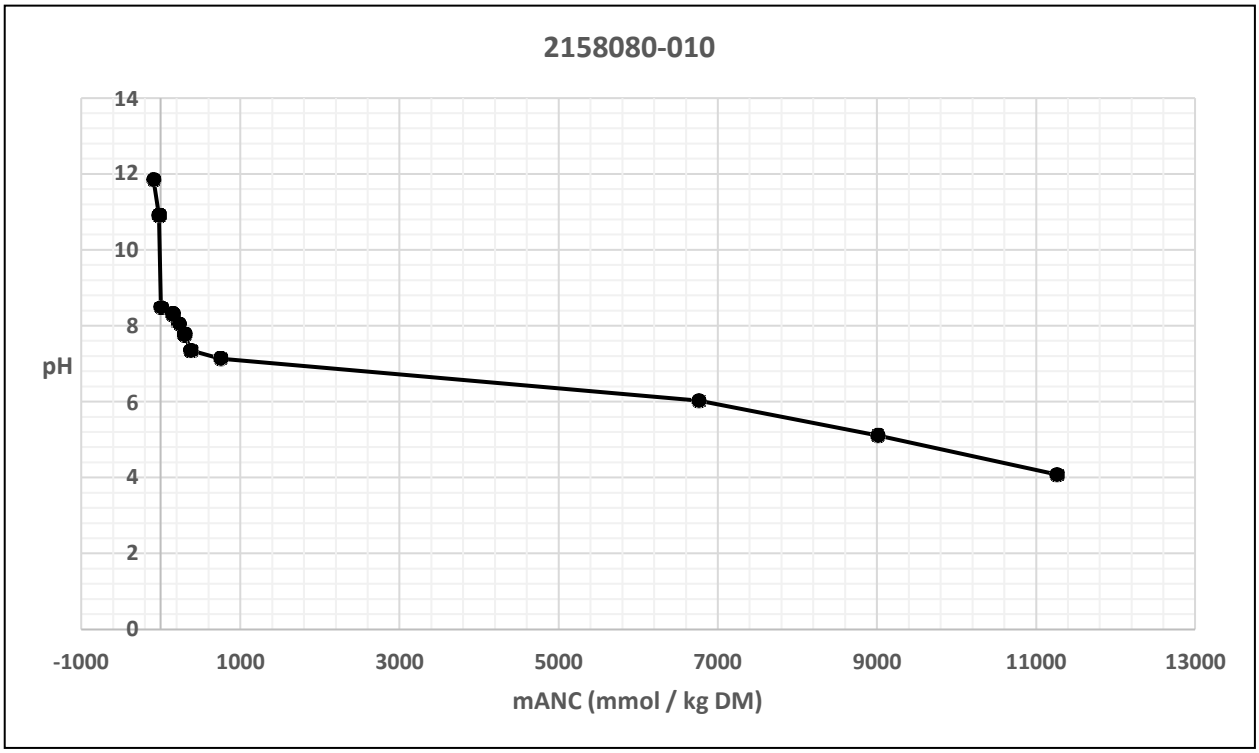


| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** | **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-001** of: **20/02/2024**

Description: **Waste sample from sampling point named "F1S1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-011. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **25-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 85 | mg/kg | 15 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 5,3 | mg/kg | 1,3 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 62 | mg/kg | 11 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 8,2 | mg/kg | 3,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 400 | mg/kg | 32 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 8,8 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,09 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 37 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,095 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 5,5 | | 0,9 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,895 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 8,8 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 104 | | 25 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-001
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 22/01/2024
End Test Date: 25/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | 0 | 0,1152 | 0,4319 | 0,8639 | 6,9110 | 9,2147 | 13,8220 | 17,2775 | 20,7330 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0691 | 0,0173 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0691 | -0,0173 | 0 | 0,1152 | 0,4319 | 0,8639 | 6,9110 | 9,2147 | 13,8220 | 17,2775 | 20,7330 |
| mANC (mmol / kg) | -69,11 | -17,28 | 0 | 115,18 | 431,94 | 863,88 | 6911,01 | 9214,69 | 13822,03 | 17277,54 | 20733,04 |
| $w_{dr}$ (%) | 94,47 | 94,47 | 94,47 | 94,47 | 94,47 | 94,47 | 94,47 | 94,47 | 94,47 | 94,47 | 94,47 |
| un-dried mass of the test portion (g) | 91,9 | 91,9 | 95 | 91,9 | 91,9 | 91,9 | 91,9 | 91,9 | 91,9 | 91,9 | 91,9 |
| $M_d$ (g) | 86,82 | 86,82 | 90 | 86,82 | 86,82 | 86,82 | 86,82 | 86,82 | 86,82 | 86,82 | 86,82 |
| V (mL) | 868,18 | 868,18 | 900 | 868,18 | 868,18 | 868,18 | 868,18 | 868,18 | 868,18 | 868,18 | 868,18 |
| $V_L$ (mL) | 863,10 | 863,10 | 895 | 863,10 | 863,10 | 863,10 | 863,10 | 863,10 | 863,10 | 863,10 | 863,10 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 803,10 | 848,10 | 895 | 861,10 | 855,60 | 848,10 | 743,10 | 703,10 | 623,10 | 563,10 | 503,10 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,15 | 11,43 | pH LT | 7,20 | 6,58 | 6,16 | 5,09 | 4,88 | 4,19 | 3,79 | 0,98 |
| pH ($t_{0+44h}$) | 12,13 | 11,39 | | 7,41 | 6,80 | 6,46 | 5,53 | 5,21 | 4,71 | 4,06 | 1,61 |
| pH ($t_{0+48h}$) | 12,11 | 11,37 | 8,83 | 7,46 | 6,84 | 6,51 | 5,58 | 5,26 | 4,78 | 4,09 | 1,64 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,02 | 0,04 | / | -0,21 | -0,22 | -0,30 | -0,44 | -0,33 | -0,52 | -0,27 | -0,63 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,02 | | -0,05 | -0,04 | -0,05 | -0,05 | -0,05 | -0,07 | -0,03 | -0,03 |

**LT: Leaching Test without acid or base addition.**


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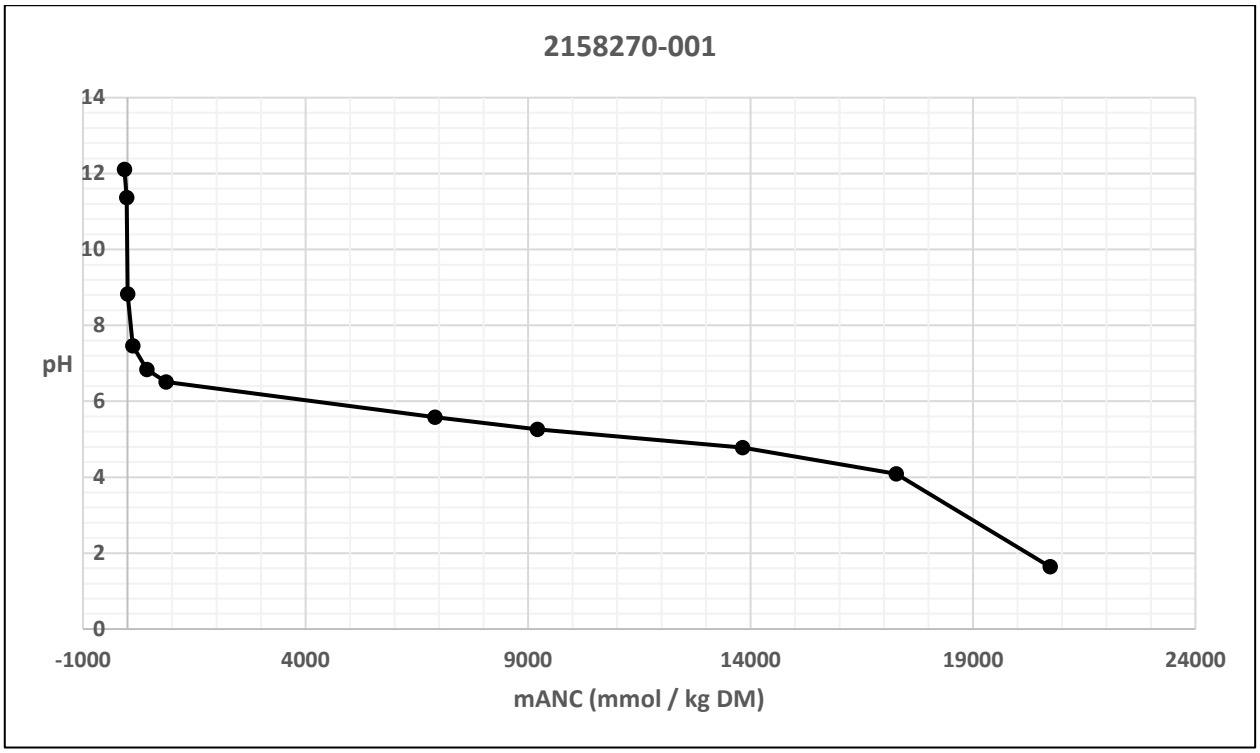


| Laboratory Technical Manager |
|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
|---|
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-002** of: **20/02/2024**

Description: **Waste sample from sampling point named "F1S2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-012. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **25-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 83 | mg/kg | 14 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 5,4 | mg/kg | 1,3 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 60 | mg/kg | 10 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 9,1 | mg/kg | 3,2 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 440 | mg/kg | 35 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 8,8 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,14 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 39,5 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,095 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 5,2 | | 0,8 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,895 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 8,8 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 101 | | 24 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Uncertainties made on the basis of the measures declared by the client / applicant.

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-002
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 22/01/2024
End Test Date: 25/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | 0 | 0,1110 | 0,4163 | 0,8326 | 6,6608 | 8,8811 | 13,3216 | 16,6520 | 19,9825 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0666 | 0,0167 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0666 | -0,0167 | 0 | 0,1110 | 0,4163 | 0,8326 | 6,6608 | 8,8811 | 13,3216 | 16,6520 | 19,9825 |
| mANC (mmol / kg) | -66,61 | -16,65 | 0 | 111,01 | 416,30 | 832,60 | 6660,82 | 8881,09 | 13321,64 | 16652,05 | 19982,46 |
| $w_{dr}$ (%) | 94,82 | 94,82 | 94,82 | 94,82 | 94,82 | 94,82 | 94,82 | 94,82 | 94,82 | 94,82 | 94,82 |
| un-dried mass of the test portion (g) | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| $M_d$ (g) | 90,08 | 90,08 | 90 | 90,08 | 90,08 | 90,08 | 90,08 | 90,08 | 90,08 | 90,08 | 90,08 |
| V (mL) | 900,79 | 900,79 | 900 | 900,79 | 900,79 | 900,79 | 900,79 | 900,79 | 900,79 | 900,79 | 900,79 |
| $V_L$ (mL) | 895,87 | 895,87 | 895 | 895,87 | 895,87 | 895,87 | 895,87 | 895,87 | 895,87 | 895,87 | 895,87 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 835,87 | 880,87 | 895 | 893,87 | 888,37 | 880,87 | 775,87 | 735,87 | 655,87 | 595,87 | 535,87 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,13 | 11,39 | pH LT | 7,19 | 6,49 | 6,19 | 5,06 | 4,78 | 4,26 | 3,63 | 1,03 |
| pH ($t_{0+44h}$) | 12,12 | 11,36 | | 7,39 | 6,75 | 6,43 | 5,54 | 5,16 | 4,70 | 3,97 | 1,55 |
| pH ($t_{0+48h}$) | 12,10 | 11,35 | 8,80 | 7,43 | 6,80 | 6,46 | 5,58 | 5,19 | 4,74 | 4,03 | 1,60 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,01 | 0,03 | / | -0,20 | -0,26 | -0,24 | -0,48 | -0,38 | -0,44 | -0,34 | -0,52 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,01 | | -0,04 | -0,05 | -0,03 | -0,04 | -0,03 | -0,04 | -0,06 | -0,05 |

**LT: Leaching Test without acid or base addition.**


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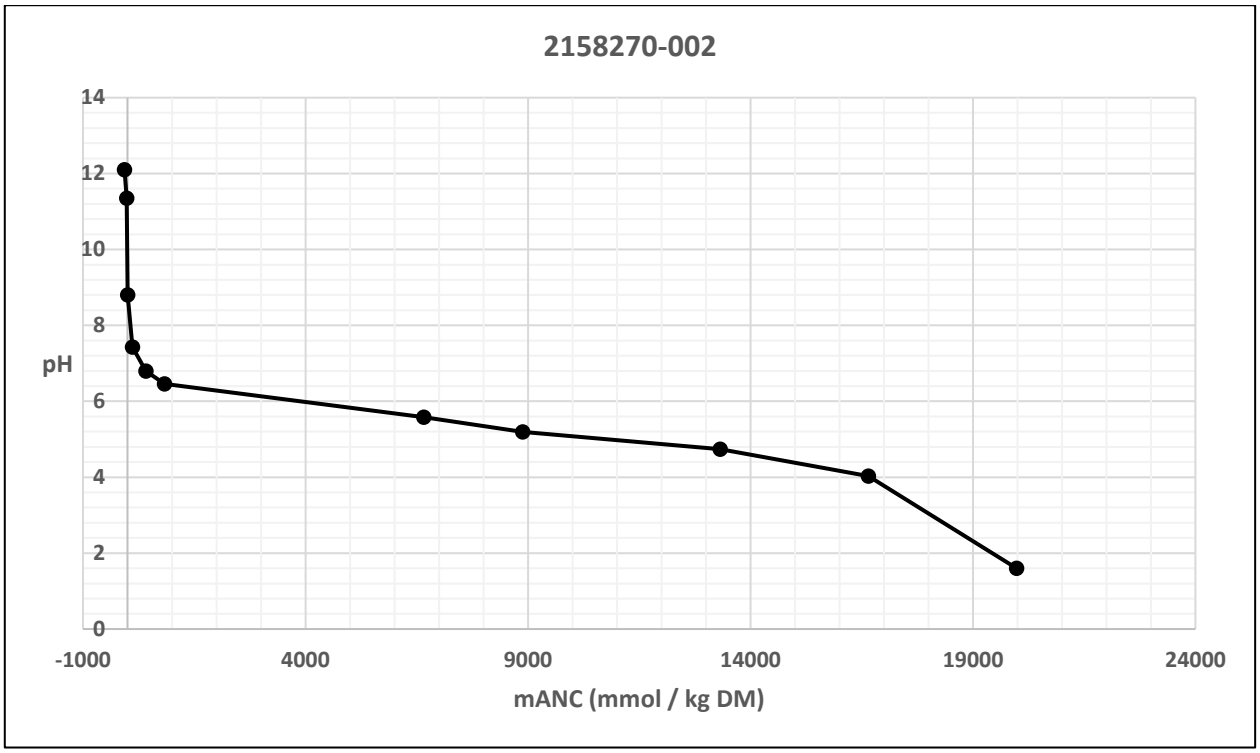


| Laboratory Technical Manager |
|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
|---|
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-003** of: **20/02/2024**

Description: **Waste sample from sampling point named "F1M1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-013. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **25-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 73 | mg/kg | 13 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 6,1 | mg/kg | 1,5 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 47,0 | mg/kg | 8,1 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 4,9 | mg/kg | 2,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 320 | mg/kg | 26 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,1 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,17 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 33,7 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,094 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 4,1 | | 0,6 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,896 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 9,1 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 93 | | 22 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-003**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Uncertainties made on the basis of the measures declared by the client / applicant.

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-003
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 22/01/2024
End Test Date: 25/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | 0 | 0,1109 | 0,4158 | 0,8316 | 6,6524 | 8,8699 | 13,3048 | 16,6310 | 19,9572 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0665 | 0,0166 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0665 | -0,0166 | 0 | 0,1109 | 0,4158 | 0,8316 | 6,6524 | 8,8699 | 13,3048 | 16,6310 | 19,9572 |
| mANC (mmol / kg) | -66,52 | -16,63 | 0 | 110,87 | 415,78 | 831,55 | 6652,40 | 8869,87 | 13304,80 | 16631,00 | 19957,20 |
| $w_{dr}$ (%) | 95,95 | 95,95 | 95,95 | 95,95 | 95,95 | 95,95 | 95,95 | 95,95 | 95,95 | 95,95 | 95,95 |
| un-dried mass of the test portion (g) | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| $M_d$ (g) | 90,19 | 90,19 | 90 | 90,19 | 90,19 | 90,19 | 90,19 | 90,19 | 90,19 | 90,19 | 90,19 |
| V (mL) | 901,93 | 901,93 | 900 | 901,93 | 901,93 | 901,93 | 901,93 | 901,93 | 901,93 | 901,93 | 901,93 |
| $V_L$ (mL) | 898,12 | 898,12 | 896 | 898,12 | 898,12 | 898,12 | 898,12 | 898,12 | 898,12 | 898,12 | 898,12 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 838,12 | 883,12 | 896 | 896,12 | 890,62 | 883,12 | 778,12 | 738,12 | 658,12 | 598,12 | 538,12 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 11,75 | 10,96 | pH LT | 6,84 | 6,04 | 5,39 | 5,17 | 4,89 | 4,87 | 4,16 | 0,97 |
| pH ($t_{0+44h}$) | 11,72 | 10,92 | | 7,04 | 6,25 | 5,71 | 5,41 | 5,13 | 5,04 | 4,53 | 1,23 |
| pH ($t_{0+48h}$) | 11,70 | 10,89 | 9,09 | 7,09 | 6,28 | 5,76 | 5,47 | 5,19 | 5,07 | 4,59 | 1,26 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,03 | 0,04 | / | -0,20 | -0,21 | -0,32 | -0,24 | -0,24 | -0,17 | -0,37 | -0,26 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,03 | | -0,05 | -0,03 | -0,05 | -0,06 | -0,06 | -0,03 | -0,06 | -0,03 |

**LT: Leaching Test without acid or base addition.**


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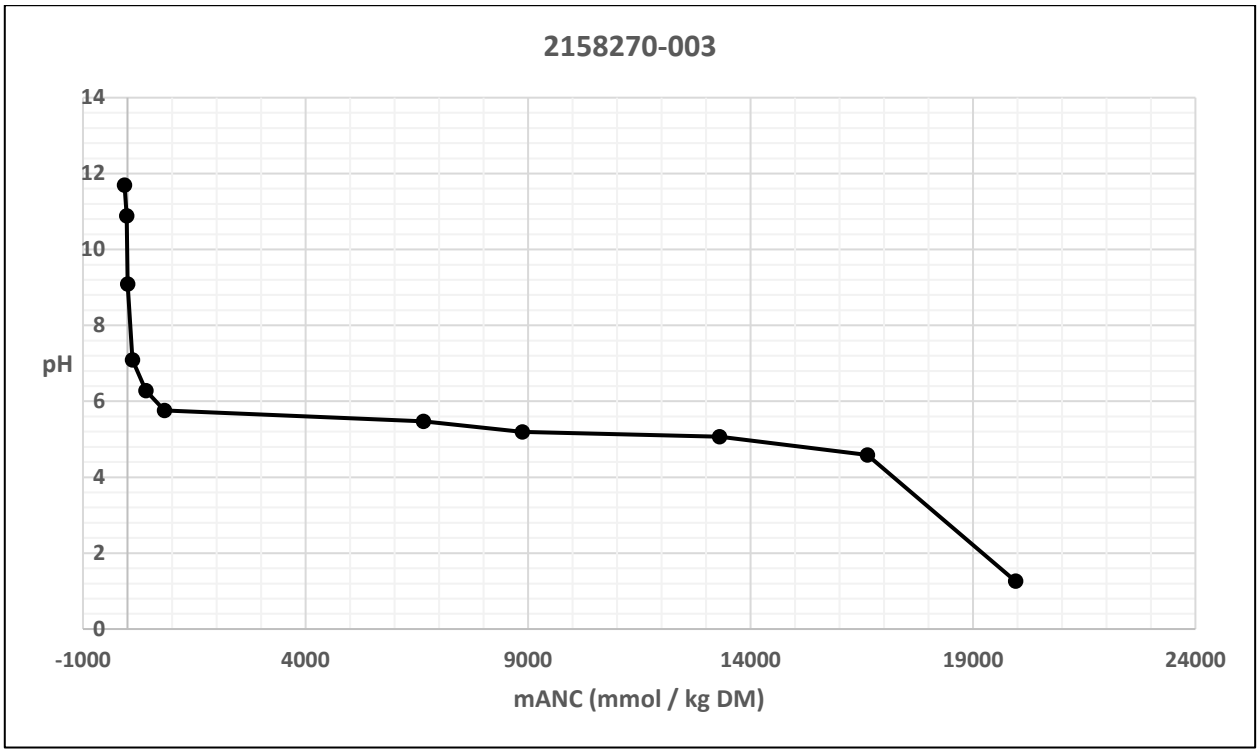


| Laboratory Technical Manager |
| --- |
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
| --- |
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-004** of: **20/02/2024**

Description: **Waste sample from sampling point named "F1M2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-014. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **25-gen-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 82 | mg/kg | 14 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 6,2 | mg/kg | 1,5 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 46,0 | mg/kg | 8,0 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 4,8 | mg/kg | 2,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 300 | mg/kg | 24 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,2 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,12 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 35,7 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,094 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 3,8 | | 0,6 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,896 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 9,2 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 92 | | 22 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-004**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-004
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 22/01/2024
End Test Date: 25/01/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | 0 | 0,1106 | 0,4147 | 0,8293 | 6,6344 | 8,8459 | 13,2688 | 16,5861 | 19,9033 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0663 | 0,0166 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0663 | -0,0166 | 0 | 0,1106 | 0,4147 | 0,8293 | 6,6344 | 8,8459 | 13,2688 | 16,5861 | 19,9033 |
| mANC (mmol / kg) | -66,34 | -16,59 | 0 | 110,57 | 414,65 | 829,30 | 6634,42 | 8845,90 | 13268,85 | 16586,06 | 19903,27 |
| $w_{dr}$ (%) | 96,21 | 96,21 | 96,21 | 96,21 | 96,21 | 96,21 | 96,21 | 96,21 | 96,21 | 96,21 | 96,21 |
| un-dried mass of the test portion (g) | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| $M_d$ (g) | 90,44 | 90,44 | 90 | 90,44 | 90,44 | 90,44 | 90,44 | 90,44 | 90,44 | 90,44 | 90,44 |
| V (mL) | 904,37 | 904,37 | 900 | 904,37 | 904,37 | 904,37 | 904,37 | 904,37 | 904,37 | 904,37 | 904,37 |
| $V_L$ (mL) | 900,81 | 900,81 | 896 | 900,81 | 900,81 | 900,81 | 900,81 | 900,81 | 900,81 | 900,81 | 900,81 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 840,81 | 885,81 | 896 | 898,81 | 893,31 | 885,81 | 780,81 | 740,81 | 660,81 | 600,81 | 540,81 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 11,77 | 11,00 | pH LT | 6,89 | 6,13 | 5,51 | 5,26 | 5,06 | 4,89 | 4,19 | 0,88 |
| pH ($t_{0+44h}$) | 11,76 | 10,99 | | 7,15 | 6,38 | 5,87 | 5,60 | 5,28 | 5,14 | 4,77 | 1,20 |
| pH ($t_{0+48h}$) | 11,74 | 10,96 | 9,15 | 7,19 | 6,41 | 5,93 | 5,64 | 5,33 | 5,19 | 4,83 | 1,21 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,01 | 0,01 | / | -0,26 | -0,25 | -0,36 | -0,34 | -0,22 | -0,25 | -0,58 | -0,32 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,03 | | -0,04 | -0,03 | -0,06 | -0,04 | -0,05 | -0,05 | -0,06 | -0,01 |

**LT: Leaching Test without acid or base addition.**


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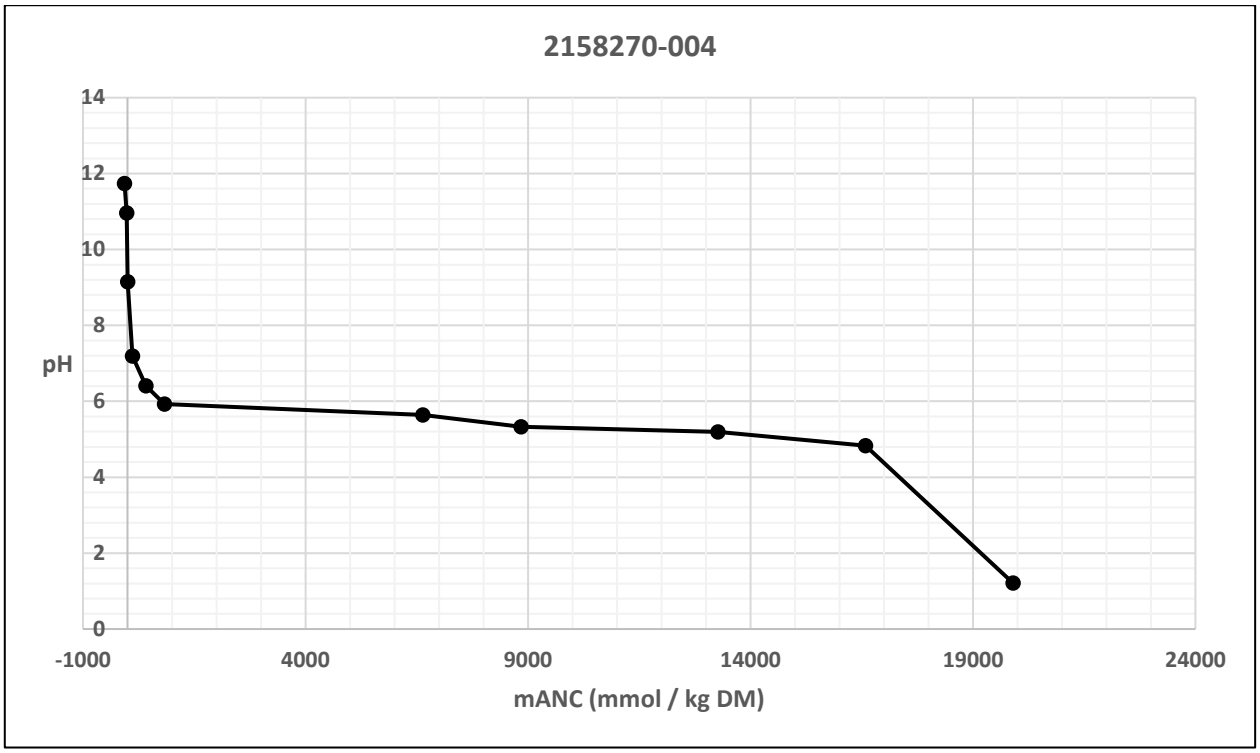


| Laboratory Technical Manager |
|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
|---|
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-005** of: **20/02/2024**

Description: **Waste sample from sampling point named "F1D1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-015. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **01-feb-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 80 | mg/kg | 14 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 5,7 | mg/kg | 1,4 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 48,0 | mg/kg | 8,4 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 5,2 | mg/kg | 2,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 280 | mg/kg | 22 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,1 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,15 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 45,5 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,093 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 2,8 | | 0,4 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,897 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 9,1 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 93 | | 22 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".

By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.

By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".

By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".

By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".

"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".

By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".

By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".

By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".

By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".

"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".

"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".

By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".

"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".

By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-005**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-005
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 29/01/2024
End Test Date: 01/02/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | / | 0,1106 | 0,4149 | 0,8299 | 6,6388 | 8,8518 | 13,2777 | 16,5971 | 19,9165 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0664 | 0,0166 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0664 | -0,0166 | 0 | 0,1106 | 0,4149 | 0,8299 | 6,6388 | 8,8518 | 13,2777 | 16,5971 | 19,9165 |
| mANC (mmol / kg) | -66,39 | -16,60 | 0 | 110,65 | 414,93 | 829,85 | 6638,83 | 8851,77 | 13277,66 | 16597,07 | 19916,48 |
| $w_{dr}$ (%) | 97,18 | 97,18 | 97,18 | 97,18 | 97,18 | 97,18 | 97,18 | 97,18 | 97,18 | 97,18 | 97,18 |
| un-dried mass of the test portion (g) | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| $M_d$ (g) | 90,38 | 90,38 | 90 | 90,38 | 90,38 | 90,38 | 90,38 | 90,38 | 90,38 | 90,38 | 90,38 |
| V (mL) | 903,77 | 903,77 | 900 | 903,77 | 903,77 | 903,77 | 903,77 | 903,77 | 903,77 | 903,77 | 903,77 |
| $V_L$ (mL) | 901,15 | 901,15 | 897 | 901,15 | 901,15 | 901,15 | 901,15 | 901,15 | 901,15 | 901,15 | 901,15 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 841,15 | 886,15 | 897 | 899,15 | 893,65 | 886,15 | 781,15 | 741,15 | 661,15 | 601,15 | 541,15 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 11,76 | 11,03 | pH LT | 6,85 | 6,09 | 5,46 | 5,23 | 5,03 | 4,96 | 4,21 | 0,51 |
| pH ($t_{0+44h}$) | 11,72 | 10,98 | | 7,06 | 6,28 | 5,72 | 5,41 | 5,19 | 5,09 | 4,61 | 0,70 |
| pH ($t_{0+48h}$) | 11,68 | 10,93 | 9,12 | 7,14 | 6,35 | 5,80 | 5,56 | 5,30 | 5,12 | 4,78 | 0,70 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,04 | 0,05 | / | -0,21 | -0,19 | -0,26 | -0,18 | -0,16 | -0,13 | -0,40 | -0,19 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,04 | 0,05 | | -0,08 | -0,07 | -0,08 | -0,15 | -0,11 | -0,03 | -0,17 | 0,00 |

**LT: Leaching Test without acid or base addition.**


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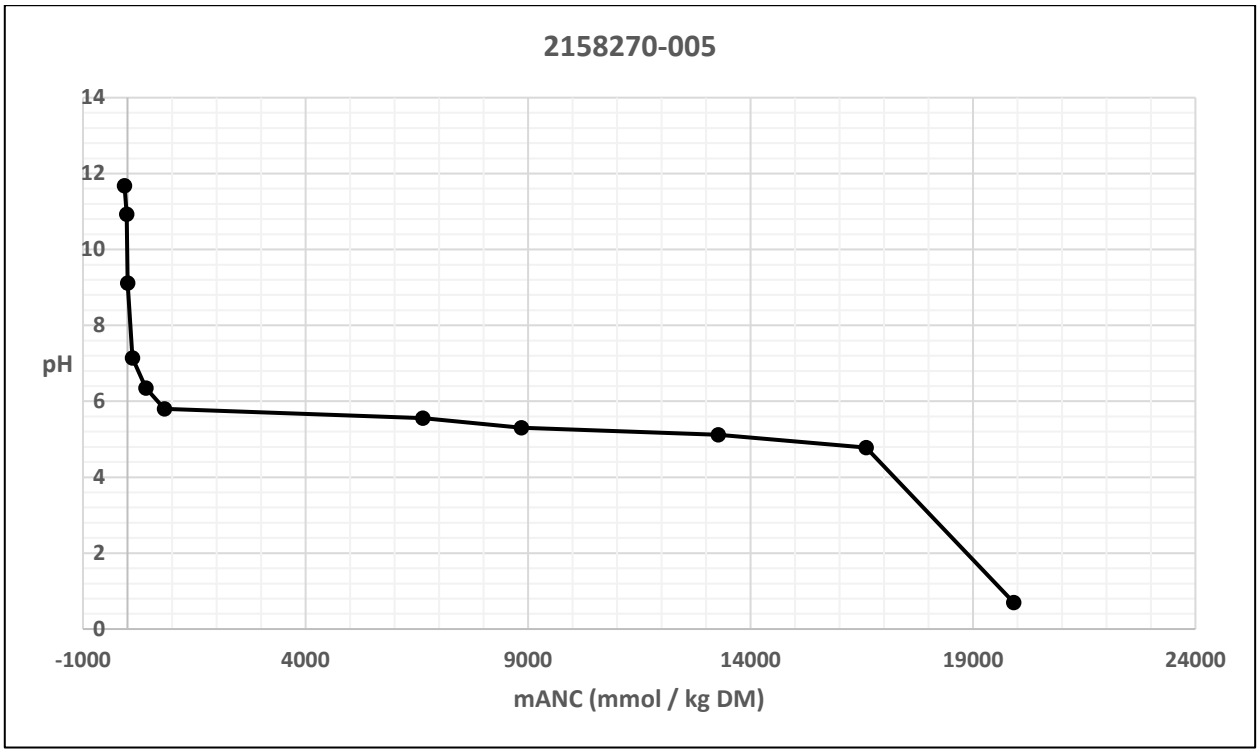


| Laboratory Technical Manager |
|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
|---|
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-006** of: **20/02/2024**

Description: **Waste sample from sampling point named "F1D2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-016. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **01-feb-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 79 | mg/kg | 14 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 5,8 | mg/kg | 1,4 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 47,0 | mg/kg | 8,1 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 5,0 | mg/kg | 2,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 380 | mg/kg | 30 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,2 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,13 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 44,2 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,093 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 3,3 | | 0,5 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,897 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 9,2 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 94 | | 22 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".

By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.

By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".

By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".

By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".

"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".

By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".

By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".

By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".

By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".

"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".

"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".

By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".

"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".

By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-006**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-006
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 29/01/2024
End Test Date: 01/02/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | / | 0,1112 | 0,4169 | 0,8337 | 6,6697 | 8,8930 | 13,3394 | 16,6743 | 20,0091 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0667 | 0,0167 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0667 | -0,0167 | 0 | 0,1112 | 0,4169 | 0,8337 | 6,6697 | 8,8930 | 13,3394 | 16,6743 | 20,0091 |
| mANC (mmol / kg) | -66,70 | -16,67 | 0 | 111,16 | 416,86 | 833,71 | 6669,71 | 8892,95 | 13339,43 | 16674,28 | 20009,14 |
| $w_{dr}$ (%) | 96,73 | 96,73 | 96,73 | 96,73 | 96,73 | 96,73 | 96,73 | 96,73 | 96,73 | 96,73 | 96,73 |
| un-dried mass of the test portion (g) | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| $M_d$ (g) | 89,96 | 89,96 | 90 | 89,96 | 89,96 | 89,96 | 89,96 | 89,96 | 89,96 | 89,96 | 89,96 |
| V (mL) | 899,59 | 899,59 | 900 | 899,59 | 899,59 | 899,59 | 899,59 | 899,59 | 899,59 | 899,59 | 899,59 |
| $V_L$ (mL) | 896,55 | 896,55 | 897 | 896,55 | 896,55 | 896,55 | 896,55 | 896,55 | 896,55 | 896,55 | 896,55 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 836,55 | 881,55 | 897 | 894,55 | 889,05 | 881,55 | 776,55 | 736,55 | 656,55 | 596,55 | 536,55 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,33 | 11,48 | pH LT | 7,16 | 6,26 | 6,03 | 5,21 | 5,16 | 4,66 | 4,23 | 0,63 |
| pH ($t_{0+44h}$) | 12,26 | 11,43 | | 7,36 | 6,51 | 6,16 | 5,54 | 5,37 | 4,93 | 4,56 | 0,74 |
| pH ($t_{0+48h}$) | 12,20 | 11,40 | 9,19 | 7,40 | 6,60 | 6,25 | 5,68 | 5,41 | 4,98 | 4,62 | 0,73 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,07 | 0,05 | / | -0,20 | -0,25 | -0,13 | -0,33 | -0,21 | -0,27 | -0,33 | -0,11 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,06 | 0,03 | | -0,04 | -0,09 | -0,09 | -0,14 | -0,04 | -0,05 | -0,06 | 0,01 |

**LT: Leaching Test without acid or base addition.**


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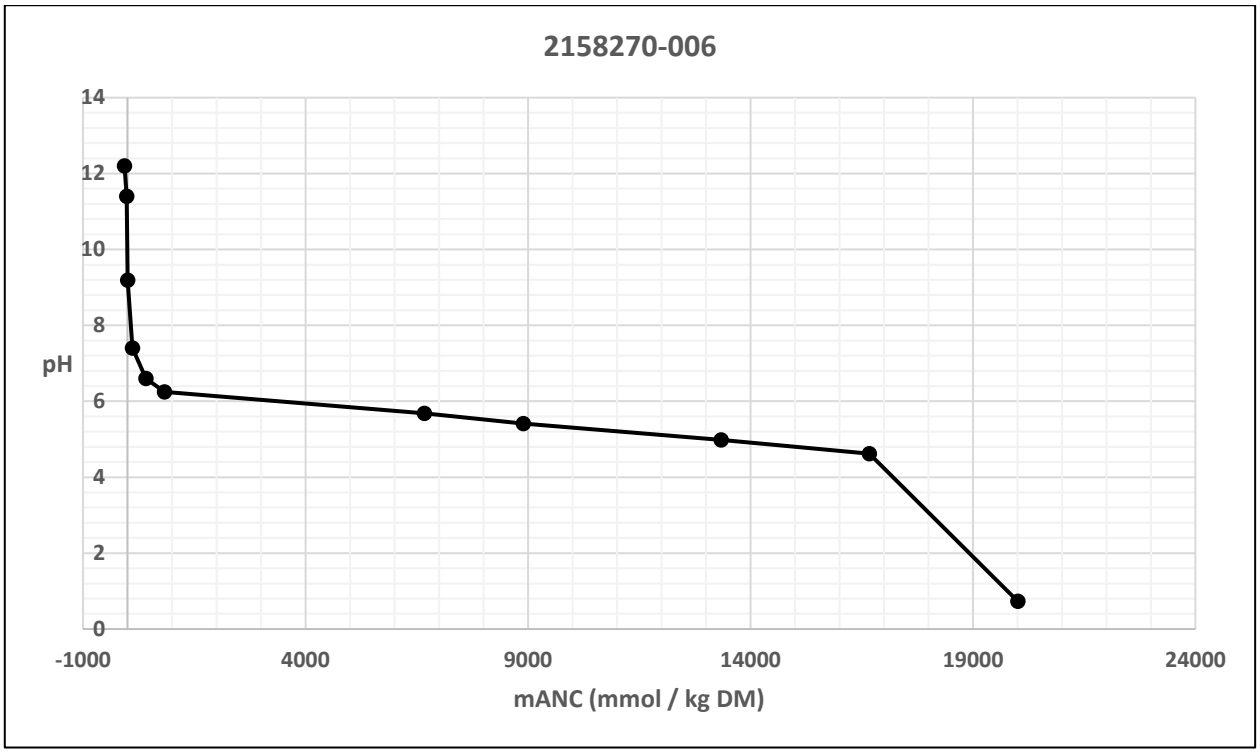


| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** | **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-007** of: **20/02/2024**

Description: **Waste sample from sampling point named "J1S1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-017. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **01-feb-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 38,0 | mg/kg | 6,7 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 5,1 | mg/kg | 1,2 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 36,0 | mg/kg | 6,3 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 12,1 | mg/kg | 4,3 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 440 | mg/kg | 35 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 8,6 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,25 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 80,6 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,096 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 7 | | 1 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,894 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 8,6 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 91 | | 21 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Uncertainties made on the basis of the measures declared by the client / applicant.

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-007**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-007
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 29/01/2024
End Test Date: 01/02/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | / | 0,1117 | 0,4188 | 0,8376 | 6,7010 | 8,9346 | 13,4020 | 16,7524 | 20,1029 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0670 | 0,0168 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0670 | -0,0168 | 0 | 0,1117 | 0,4188 | 0,8376 | 6,7010 | 8,9346 | 13,4020 | 16,7524 | 20,1029 |
| mANC (mmol / kg) | -67,01 | -16,75 | 0 | 111,68 | 418,81 | 837,62 | 6700,98 | 8934,63 | 13401,95 | 16752,44 | 20102,93 |
| $w_{dr}$ (%) | 93,27 | 93,27 | 93,27 | 93,27 | 93,27 | 93,27 | 93,27 | 93,27 | 93,27 | 93,27 | 93,27 |
| un-dried mass of the test portion (g) | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| $M_d$ (g) | 89,54 | 89,54 | 90 | 89,54 | 89,54 | 89,54 | 89,54 | 89,54 | 89,54 | 89,54 | 89,54 |
| V (mL) | 895,39 | 895,39 | 900 | 895,39 | 895,39 | 895,39 | 895,39 | 895,39 | 895,39 | 895,39 | 895,39 |
| $V_L$ (mL) | 888,93 | 888,93 | 894 | 888,93 | 888,93 | 888,93 | 888,93 | 888,93 | 888,93 | 888,93 | 888,93 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 828,93 | 873,93 | 894 | 886,93 | 881,43 | 873,93 | 768,93 | 728,93 | 648,93 | 588,93 | 528,93 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,12 | 11,32 | pH LT | 7,04 | 6,23 | 6,03 | 5,09 | 4,89 | 4,36 | 3,66 | 1,06 |
| pH ($t_{0+44h}$) | 12,09 | 11,29 | | 7,31 | 6,66 | 6,36 | 5,40 | 5,08 | 4,60 | 3,90 | 1,39 |
| pH ($t_{0+48h}$) | 12,05 | 11,26 | 8,63 | 7,37 | 6,71 | 6,40 | 5,43 | 5,12 | 4,63 | 3,93 | 1,42 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,03 | 0,03 | / | -0,27 | -0,43 | -0,33 | -0,31 | -0,19 | -0,24 | -0,24 | -0,33 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,04 | 0,03 | | -0,06 | -0,05 | -0,04 | -0,03 | -0,04 | -0,03 | -0,03 | -0,03 |

**LT: Leaching Test without acid or base addition.**


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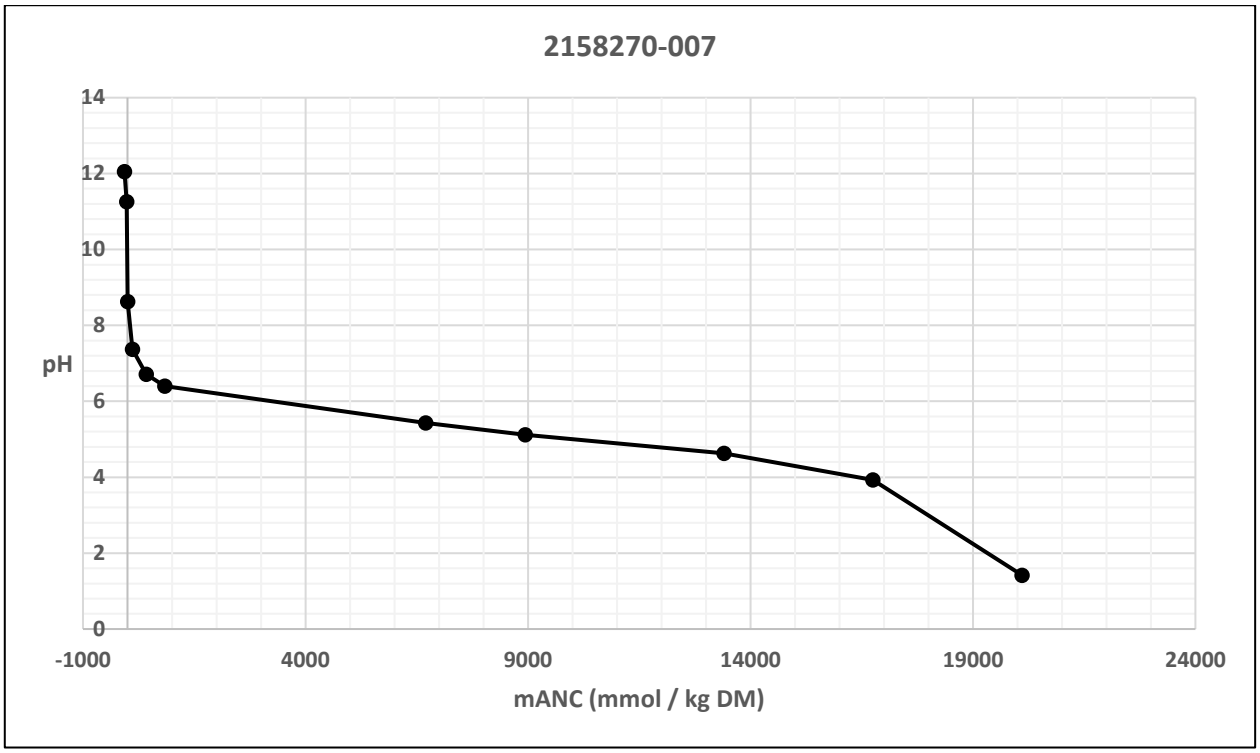


| Laboratory Technical Manager |
|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
|---|
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-008** of: **20/02/2024**

Description: **Waste sample from sampling point named "J1S2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-018. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **01-feb-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 35,0 | mg/kg | 6,0 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 6,4 | mg/kg | 1,6 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 46,0 | mg/kg | 8,1 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 11,3 | mg/kg | 4,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 460 | mg/kg | 37 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,1 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,23 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 82,5 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,095 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 5,3 | | 0,8 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,895 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 9,1 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 80 | | 19 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".

In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.

For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.

For microbiological tests on waters the uncertainty is expressed as confidence levels.

For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.

For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.

For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:

• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.

• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.

• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.

For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.

For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.

The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.

Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)

Information about sampling uncertainty is available at the laboratory.

This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.

The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".

By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.

By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".

By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".

By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".

"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".

By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".

By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".

By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".

By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".

"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".

"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".

By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".

"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".

By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-008**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-008
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 29/01/2024
End Test Date: 01/02/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | 0 | 0,1111 | 0,4166 | 0,8332 | 6,6657 | 8,8877 | 13,3315 | 16,6644 | 19,9972 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0667 | 0,0167 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0667 | -0,0167 | 0 | 0,1111 | 0,4166 | 0,8332 | 6,6657 | 8,8877 | 13,3315 | 16,6644 | 19,9972 |
| mANC (mmol / kg) | -66,66 | -16,66 | 0 | 111,10 | 416,61 | 833,22 | 6665,74 | 8887,65 | 13331,48 | 16664,35 | 19997,22 |
| $w_{dr}$ (%) | 94,75 | 94,75 | 94,75 | 94,75 | 94,75 | 94,75 | 94,75 | 94,75 | 94,75 | 94,75 | 94,75 |
| un-dried mass of the test portion (g) | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| $M_d$ (g) | 90,01 | 90,01 | 90 | 90,01 | 90,01 | 90,01 | 90,01 | 90,01 | 90,01 | 90,01 | 90,01 |
| V (mL) | 900,13 | 900,13 | 900 | 900,13 | 900,13 | 900,13 | 900,13 | 900,13 | 900,13 | 900,13 | 900,13 |
| $V_L$ (mL) | 895,14 | 895,14 | 895 | 895,14 | 895,14 | 895,14 | 895,14 | 895,14 | 895,14 | 895,14 | 895,14 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 835,14 | 880,14 | 895 | 893,14 | 887,64 | 880,14 | 775,14 | 735,14 | 655,14 | 595,14 | 535,14 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,10 | 11,46 | pH LT | 6,98 | 6,31 | 6,13 | 5,21 | 5,01 | 4,87 | 3,56 | 1,33 |
| pH ($t_{0+44h}$) | 11,98 | 11,34 | | 7,24 | 6,58 | 6,36 | 5,52 | 5,33 | 5,18 | 3,95 | 0,59 |
| pH ($t_{0+48h}$) | 11,95 | 11,30 | 9,07 | 7,29 | 6,61 | 6,42 | 5,57 | 5,36 | 5,21 | 3,99 | 0,57 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,12 | 0,12 | / | -0,26 | -0,27 | -0,23 | -0,31 | -0,32 | -0,31 | -0,39 | 0,74 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,03 | 0,04 | | -0,05 | -0,03 | -0,06 | -0,05 | -0,03 | -0,03 | -0,04 | 0,02 |

**LT: Leaching Test without acid or base addition.**


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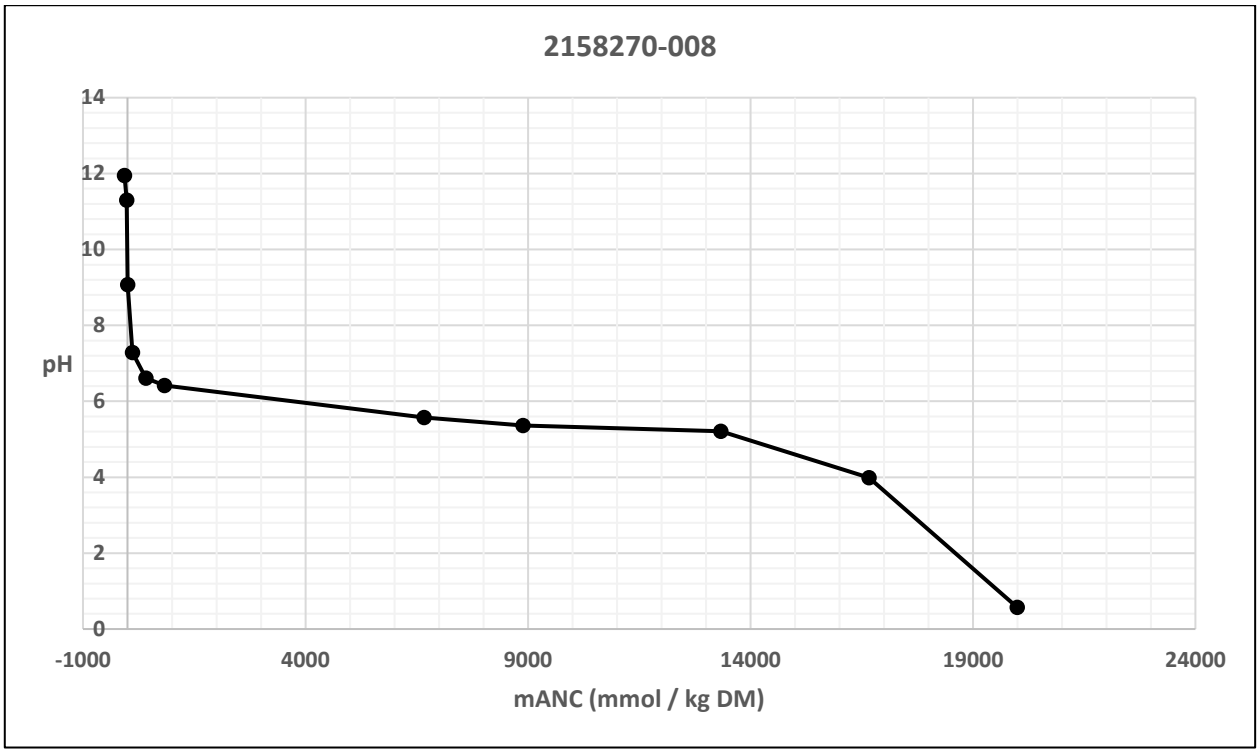


| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** | **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-009** of: **20/02/2024**

Description: **Waste sample from sampling point named "J1M1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-019. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **08-feb-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 194 | mg/kg | 34 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 6,8 | mg/kg | 1,7 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 59 | mg/kg | 10 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 6,2 | mg/kg | 2,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 540 | mg/kg | 43 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,2 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,15 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni<br>*Size reduction method* | | Pestle and mortar | | | | | |
| Frazione maggiore di 4mm (%)<br>*Fraction greater than 4mm (%)* | | 42,3 | | | | | |
| Frazione materiale non macinabile (%)<br>*Non-grind material fraction (%)* | | 0 | | | | | |
| Massa grezza Mw della porzione di prova (kg)<br>*Raw mass Mw of the test portion (kg)* | | 0,093 | | | | | |
| Rapporto del contenuto di umidità MC (%)<br>*MC moisture content ratio (%)* | | 2,8 | | 0,4 | | | |
| Data della prova che ha prodotto l'eluato<br>*Date of the test which produced the eluate* | | 16/01/2024 | | | | | |
| Volume agente lisciviante (l)<br>*Leaching agent volume (l)* | | 0,897 | | | | | |
| pH (Unità)<br>*pH (Unit)* | | 9,2 | | 0,1 | | | |
| Conducibilità (µS/cm)<br>*Conductivity (µS/cm)* | | 127 | | 30 | | | |
| Temperatura (°C)<br>*Temperature (°C)* | | 18,5 | | | | | |

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Continuation of Test Report n°: **2158270-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Uncertainties made on the basis of the measures declared by the client / applicant.

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-009**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-009
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 05/02/2024
End Test Date: 08/02/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | 0 | 0,1107 | 0,4150 | 0,8299 | 6,6395 | 8,8527 | 13,2790 | 16,5988 | 19,9185 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0664 | 0,0166 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0664 | -0,0166 | 0 | 0,1107 | 0,4150 | 0,8299 | 6,6395 | 8,8527 | 13,2790 | 16,5988 | 19,9185 |
| mANC (mmol / kg) | -66,40 | -16,60 | 0 | 110,66 | 414,97 | 829,94 | 6639,51 | 8852,68 | 13279,02 | 16598,78 | 19918,53 |
| $w_{dr}$ (%) | 97,17 | 97,17 | 97,17 | 97,17 | 97,17 | 97,17 | 97,17 | 97,17 | 97,17 | 97,17 | 97,17 |
| un-dried mass of the test portion (g) | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| $M_d$ (g) | 90,37 | 90,37 | 90 | 90,37 | 90,37 | 90,37 | 90,37 | 90,37 | 90,37 | 90,37 | 90,37 |
| V (mL) | 903,68 | 903,68 | 900 | 903,68 | 903,68 | 903,68 | 903,68 | 903,68 | 903,68 | 903,68 | 903,68 |
| $V_L$ (mL) | 901,05 | 901,05 | 897 | 901,05 | 901,05 | 901,05 | 901,05 | 901,05 | 901,05 | 901,05 | 901,05 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 841,05 | 886,05 | 897 | 899,05 | 893,55 | 886,05 | 781,05 | 741,05 | 661,05 | 601,05 | 541,05 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,11 | 11,39 | pH LT | 6,85 | 6,18 | 5,89 | 4,98 | 4,86 | 4,09 | 3,78 | 1,69 |
| pH ($t_{0+44h}$) | 12,08 | 11,36 | | 6,98 | 6,39 | 6,12 | 5,20 | 5,09 | 4,51 | 4,03 | 1,13 |
| pH ($t_{0+48h}$) | 12,05 | 11,34 | 9,19 | 7,01 | 6,43 | 6,15 | 5,24 | 5,11 | 4,55 | 4,06 | 1,11 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,03 | 0,03 | / | -0,13 | -0,21 | -0,23 | -0,22 | -0,23 | -0,42 | -0,25 | 0,56 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,03 | 0,02 | | -0,03 | -0,04 | -0,03 | -0,04 | -0,02 | -0,04 | -0,03 | 0,02 |

**LT: Leaching Test without acid or base addition.**


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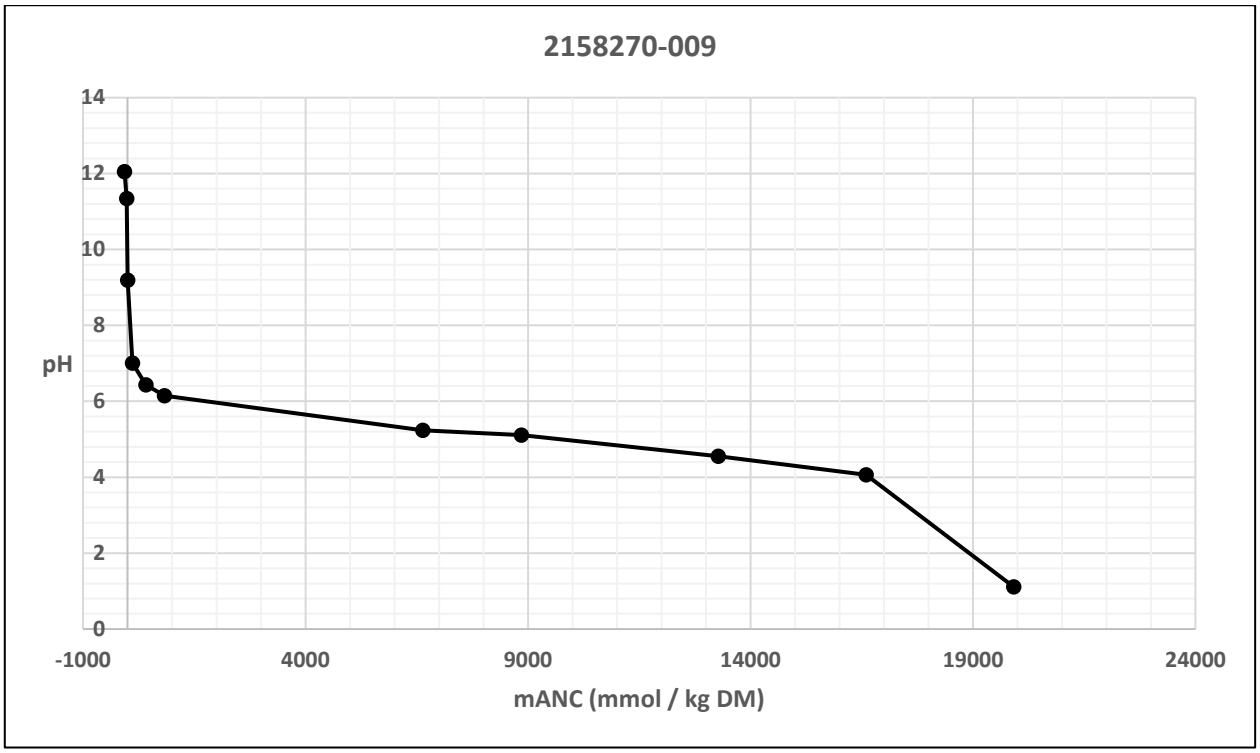


| Laboratory Technical Manager |
| --- |
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
| --- |
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-010** of: **20/02/2024**

Description: **Waste sample from sampling point named "J1M2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-020. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **08-feb-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 176 | mg/kg | 31 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 6,6 | mg/kg | 1,6 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 49,0 | mg/kg | 8,6 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 4,3 | mg/kg | 2,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 560 | mg/kg | 45 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,3 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,29 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 29,4 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,092 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 2,4 | | 0,4 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,898 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 9,3 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 123 | | 29 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Uncertainties made on the basis of the measures declared by the client / applicant.

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-010**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-010
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 05/02/2024
End Test Date: 08/02/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | 0 | 0,1114 | 0,4178 | 0,8356 | 6,6848 | 8,9131 | 13,3697 | 16,7121 | 20,0545 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0668 | 0,0167 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0668 | -0,0167 | 0 | 0,1114 | 0,4178 | 0,8356 | 6,6848 | 8,9131 | 13,3697 | 16,7121 | 20,0545 |
| mANC (mmol / kg) | -66,85 | -16,71 | 0 | 111,41 | 417,80 | 835,61 | 6684,85 | 8913,13 | 13369,70 | 16712,12 | 20054,55 |
| $w_{dr}$ (%) | 97,56 | 97,56 | 97,56 | 97,56 | 97,56 | 97,56 | 97,56 | 97,56 | 97,56 | 97,56 | 97,56 |
| un-dried mass of the test portion (g) | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| $M_d$ (g) | 89,76 | 89,76 | 90 | 89,76 | 89,76 | 89,76 | 89,76 | 89,76 | 89,76 | 89,76 | 89,76 |
| V (mL) | 897,55 | 897,55 | 900 | 897,55 | 897,55 | 897,55 | 897,55 | 897,55 | 897,55 | 897,55 | 897,55 |
| $V_L$ (mL) | 895,31 | 895,31 | 898 | 895,31 | 895,31 | 895,31 | 895,31 | 895,31 | 895,31 | 895,31 | 895,31 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 835,31 | 880,31 | 92 | 893,31 | 887,81 | 880,31 | 775,31 | 735,31 | 655,31 | 595,31 | 535,31 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,11 | 11,22 | pH LT | 6,81 | 6,09 | 5,87 | 4,89 | 4,36 | 4,09 | 3,87 | 3,18 |
| pH ($t_{0+44h}$) | 12,10 | 11,19 | | 6,98 | 6,40 | 6,12 | 5,18 | 5,09 | 4,70 | 4,32 | 3,73 |
| pH ($t_{0+48h}$) | 12,08 | 11,16 | 9,25 | 7,03 | 6,44 | 6,16 | 5,22 | 5,12 | 4,73 | 4,36 | 3,77 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,01 | 0,03 | / | -0,17 | -0,31 | -0,25 | -0,29 | -0,73 | -0,61 | -0,45 | -0,55 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,03 | | -0,05 | -0,04 | -0,04 | -0,04 | -0,03 | -0,03 | -0,04 | -0,04 |

**LT: Leaching Test without acid or base addition.**


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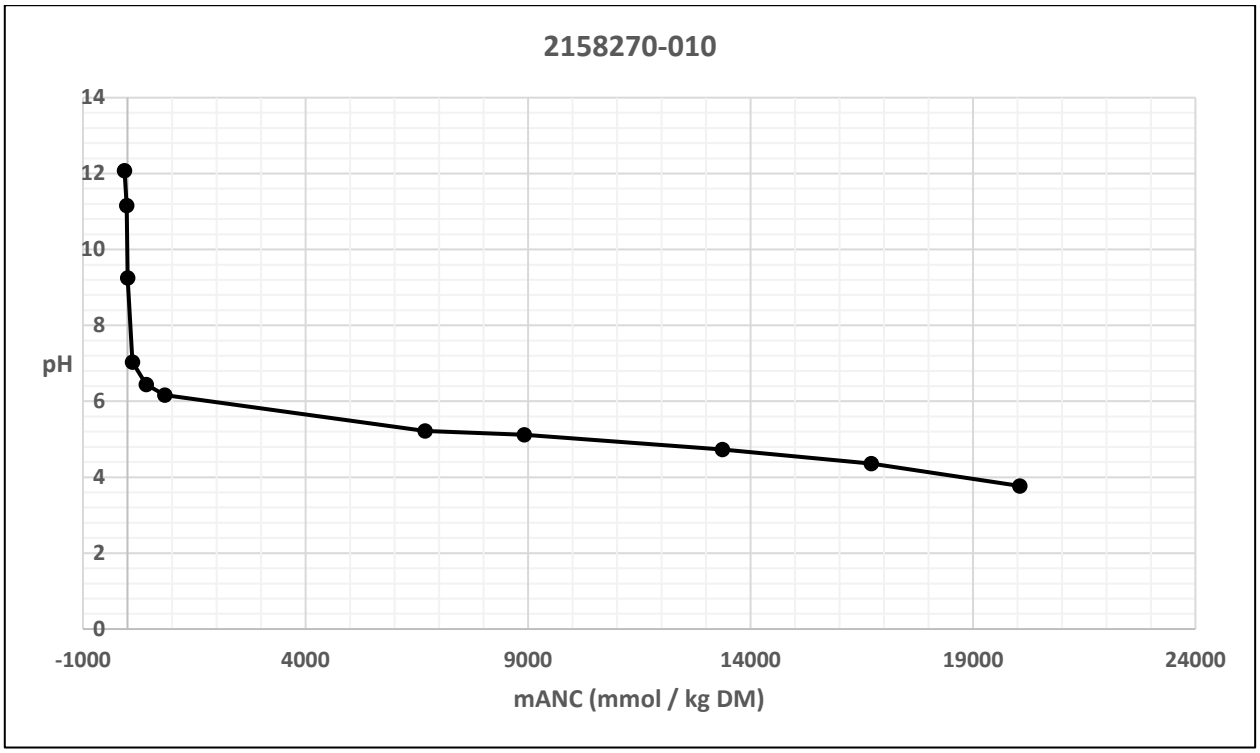


| Laboratory Technical Manager |
| --- |
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
| --- |
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-011** of: **20/02/2024**

Description: **Waste sample from sampling point named "J1D1L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-021. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **08-feb-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | 0,026 | mg/kg | 0,005 | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-011**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 203 | mg/kg | 35 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 5,8 | mg/kg | 1,4 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 43,0 | mg/kg | 7,5 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 5,3 | mg/kg | 2,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 600 | mg/kg | 48 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,2 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,28 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-011**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 31,2 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,093 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 2,9 | | 0,4 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,897 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 9,2 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 122 | | 29 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-011**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-011**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Uncertainties made on the basis of the measures declared by the client / applicant.

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-011**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-011
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 05/02/2024
End Test Date: 08/02/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | 0 | 0,1107 | 0,4151 | 0,8303 | 6,6422 | 8,8563 | 13,2845 | 16,6056 | 19,9267 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0664 | 0,0166 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0664 | -0,0166 | 0 | 0,1107 | 0,4151 | 0,8303 | 6,6422 | 8,8563 | 13,2845 | 16,6056 | 19,9267 |
| mANC (mmol / kg) | -66,42 | -16,61 | 0 | 110,70 | 415,14 | 830,28 | 6642,25 | 8856,33 | 13284,49 | 16605,61 | 19926,74 |
| $w_{dr}$ (%) | 97,13 | 97,13 | 97,13 | 97,13 | 97,13 | 97,13 | 97,13 | 97,13 | 97,13 | 97,13 | 97,13 |
| un-dried mass of the test portion (g) | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| $M_d$ (g) | 90,33 | 90,33 | 90 | 90,33 | 90,33 | 90,33 | 90,33 | 90,33 | 90,33 | 90,33 | 90,33 |
| V (mL) | 903,31 | 903,31 | 900 | 903,31 | 903,31 | 903,31 | 903,31 | 903,31 | 903,31 | 903,31 | 903,31 |
| $V_L$ (mL) | 900,64 | 900,64 | 897 | 900,64 | 900,64 | 900,64 | 900,64 | 900,64 | 900,64 | 900,64 | 900,64 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 840,64 | 885,64 | 897 | 898,64 | 893,14 | 885,64 | 780,64 | 740,64 | 660,64 | 600,64 | 540,64 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,17 | 11,47 | pH LT | 6,81 | 6,09 | 5,87 | 4,96 | 4,67 | 4,06 | 3,87 | 3,51 |
| pH ($t_{0+44h}$) | 12,16 | 11,46 | | 7,08 | 6,50 | 6,09 | 5,28 | 5,08 | 4,56 | 4,19 | 4,03 |
| pH ($t_{0+48h}$) | 12,14 | 11,44 | 9,22 | 7,10 | 6,53 | 6,11 | 5,31 | 5,09 | 4,60 | 4,22 | 4,07 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,01 | 0,01 | / | -0,27 | -0,41 | -0,22 | -0,32 | -0,41 | -0,50 | -0,32 | -0,52 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,02 | | -0,02 | -0,03 | -0,02 | -0,03 | -0,01 | -0,04 | -0,03 | -0,04 |

**LT: Leaching Test without acid or base addition.**


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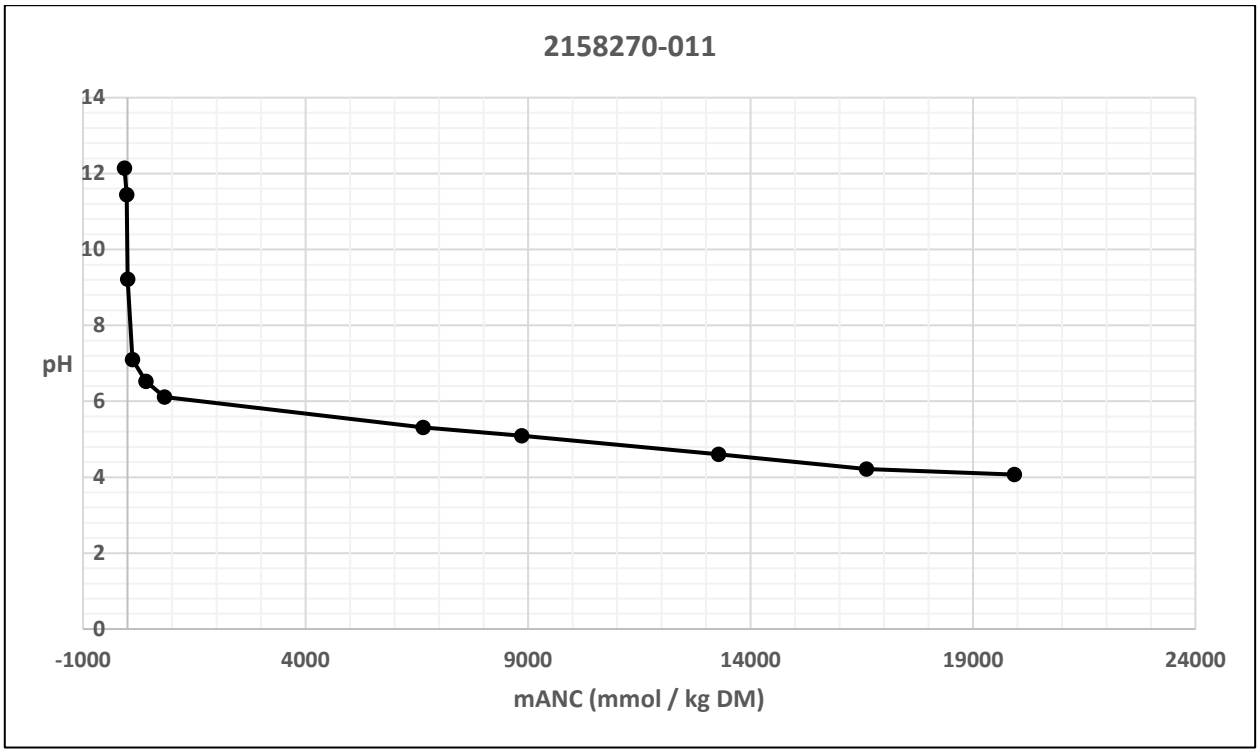


| Laboratory Technical Manager |
|---|
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
|---|
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2158270-012** of: **20/02/2024**

Description: **Waste sample from sampling point named "J1D2L" - Sampled by the customer - Profile 02 - Ecohive complex in Maghtab, Naxxar ID Sun Lab 2023012014C-022. Activity required by SUNLAB GROUP Ltd**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2158270**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **15-dic-23**

Sample Reception Date: **11-gen-24**

Test Start Date: **11-gen-24** Test Finish Date: **08-feb-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **YES**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004** | | | | | | | |
| *Leachibility Test Method UNI EN 12457-2:2004* | | | | | | | |
| Arsenico TC | UNI EN ISO 17294-2:2016 | 0,028 | mg/kg | 0,006 | | | |
| *Arsenic LT* | | | | | | | |
| Antimonio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Antimony LT* | | | | | | | |
| Bario TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Barium LT* | | | | | | | |
| Cadmio TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Cadmium LT* | | | | | | | |
| Cromo TC | UNI EN ISO 17294-2:2016 | < 0,0005 | mg/kg | | | | |
| *Chromium LT* | | | | | | | |
| Mercurio TC | UNI EN ISO 17294-2:2016 | < 0,0001 | mg/kg | | | | |
| *Mercury LT* | | | | | | | |
| Molibdeno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Molybdenum LT* | | | | | | | |

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Continuation of Test Report n°: **2158270-012**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Nichel TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Nickel LT* | | | | | | | |
| Piombo TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Lead LT* | | | | | | | |
| Rame TC | UNI EN ISO 17294-2:2016 | < 0,005 | mg/kg | | | | |
| *Copper LT* | | | | | | | |
| Stagno TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Tin LT* | | | | | | | |
| Selenio TC | UNI EN ISO 17294-2:2016 | < 0,001 | mg/kg | | | | |
| *Selenium LT* | | | | | | | |
| Zinco TC | UNI EN ISO 17294-2:2016 | < 0,01 | mg/kg | | | | |
| *Zinc LT* | | | | | | | |
| Cloruro TC | UNI EN ISO 10304-1:2009 | 219 | mg/kg | 38 | | | |
| *Chloride LT* | | | | | | | |
| Fluoruro TC | UNI EN ISO 10304-1:2009 | 6,0 | mg/kg | 1,5 | | | |
| *Fluoride LT* | | | | | | | |
| Solfato TC | UNI EN ISO 10304-1:2009 | 44,0 | mg/kg | 7,6 | | | |
| *Sulphate LT* | | | | | | | |
| DOC TC | UNI EN 1484:1999 | 5,0 | mg/kg | 2,0 | | | |
| *DOC LT* | | | | | | | |
| TDS TC | APAT CNR IRSA 2090 A Man 29 2003 | 560 | mg/kg | 45 | | | |
| *TDS LT (Total soluble fraction)* | | | | | | | |
| Indice di fenolo TC | UNI EN 16192:2012 + ISO 6439:1990 | < 0,01 | mg/kg | | | | |
| *Phenol Index LT* | | | | | | | |
| pH TC | UNI EN ISO 10523:2012 | 9,2 | unità | 0,1 | | | |
| *pH LT* | | | | | | | |
| (*) Capacità di neutralizzazione acido (ANC) TC | UNI CEN/TS 15364:2006 | See attached | mol/kg | | | | |
| *Capability of Acid neutralization (ANC) TC* | | | | | | | |
| **Dati preparazione eluato secondo UNI EN 12457-2:2004** | | | | | | | |
| *Eluate preparation data according to UNI EN 12457 - 2:2004* | | | | | | | |
| Massa del campione di laboratorio (Kg) | | 1,32 | | | | | |
| *Mass of the laboratory sample (Kg)* | | | | | | | |

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Continuation of Test Report n°: **2158270-012**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Metodo riduzione delle dimensioni | | Pestle and mortar | | | | | |
| *Size reduction method* | | | | | | | |
| Frazione maggiore di 4mm (%) | | 30,4 | | | | | |
| *Fraction greater than 4mm (%)* | | | | | | | |
| Frazione materiale non macinabile (%) | | 0 | | | | | |
| *Non-grind material fraction (%)* | | | | | | | |
| Massa grezza Mw della porzione di prova (kg) | | 0,092 | | | | | |
| *Raw mass Mw of the test portion (kg)* | | | | | | | |
| Rapporto del contenuto di umidità MC (%) | | 2,7 | | 0,4 | | | |
| *MC moisture content ratio (%)* | | | | | | | |
| Data della prova che ha prodotto l'eluato | | 16/01/2024 | | | | | |
| *Date of the test which produced the eluate* | | | | | | | |
| Volume agente lisciviante (l) | | 0,898 | | | | | |
| *Leaching agent volume (l)* | | | | | | | |
| pH (Unità) | | 9,2 | | 0,1 | | | |
| *pH (Unit)* | | | | | | | |
| Conducibilità (µS/cm) | | 127 | | 30 | | | |
| *Conductivity (µS/cm)* | | | | | | | |
| Temperatura (°C) | | 18,5 | | | | | |
| *Temperature (°C)* | | | | | | | |

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Continuation of Test Report n°: **2158270-012**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2158270-012**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Uncertainties made on the basis of the measures declared by the client / applicant.

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for waste tests**

By "PBDE summation" we mean the "Sum of Tetrabromodiphenylether, Pentabromodiphenylether, Hexabromodiphenylether, Heptabromodiphenylether, Decabromodiphenylether ".
By Hexabromocyclododecane (HBCD) we mean the "Sum of the diasteroisomers α, β, γ and of the isomer 1,2,5,6,9,10-HBCD.
By "Sum of hexachlorocyclohexanes" means the "Sum of alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane and gamma Hexachlorocyclohexane (Lindane) ".
By "BTEX summation" we mean the "Sum of Benzene, Ethylbenzene, Toluene and Xylenes".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"Endosulfan (Thiodan)" means the "Sum of alpha-endosulfan, beta-endosulfan".
By "Hexabromodiphenyl" we mean the "Sum of 2,2 ', 4,4', 5,5'-Hexabromodiphenyl, 2,2 ', 4,4', 6,6'-Hexabromodiphenyl".
By "Sum of polycyclic aromatic hydrocarbons" we mean the "Sum of Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) Pyrene, Benz (b) fluoranthene, Benzo (e) pyrene, Benzo (ghe) Perylene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a, e) pyrene, Dibenzo (a, h) Anthracene, Dibenzo (a, h) pyrene, Dibenzo (a, i) pyrene, Dibenzo (a, l ) Pyrene, Phenanthrene, Fluoranthene, Fluorene, Indeno [1,2,3-cd] Pyrene, Naphthalene, Perylene, Pyrene ".
By "Sum of polychlorinated naphthalenes" means the "Sum 1,2,3,4,5,6,7-Heptachloronaphthalene, 1,2,3,4,5,6-Hexachloronaphthalene, 1,2,3,4-Tetrachloronaphthalene , 1,2,3,5,7-Pentachloronaphthalene, 1,2,3-Trichloronaphthalene, 1,2-Dichloronaphthalene, 2-Chloronaphthalene, Octachloronaphthalene ".
By "PCB Sum" means the "Sum PCB101, PCB105, PCB110, PCB114, PCB118, PCB123, PCB126, PCB128, PCB138, PCB146, PCB149, PCB151, PCB153, PCB156, PCB157, PCB167, PCB169, PCB170, PCB177, PCB180, PCB183, PCB187, PCB189, PCB28, PCB52, PCB77, PCB81, PCB95, PCB99 ".
"Total PCBs" means the "Sum of Aroclor-1016 and Aroclor-1260".
"Total PCT" means the "Sum Aroclor-5460, Aroclor-5060, Aroclor-5442".
By "Pentachlorophenol and its salts and esters" we mean the "Sum of Pentachlorophenol, Pentachlorophenol acetate, Pentachlorophenol dodecanoate".
"Perfluorooctanesulfonate acid and its derivatives" means the "Sum of N-Methylperfluoro-1-octanesulfonamide (N-MeFOSA), N-Ethylperfluoro-1octanesulfonamide (N-EtFOSA), N-Methylperfluoro-1-octanesulfonamido (N-Ethanolamido) -ethanamido -MeFOSE), 2-N-Ethylperfluoro-1-octanesulfonamido) -ethanol (NEtFOSE), Perfluorooctane sulfonic acid (PFOS) ".
By "Summation of Chlorinated Pesticides" means the "Sum of 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha -Clordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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Continuation of Test Report n°: **2158270-012**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dieldan sulfan, Endosulfan alfa Endrin, Endrin Aldehyde, Heptachlor, Heptachloroepoxide, Hexachlorobenzene, Fenarimol, gamma-Chlordano, Isodrin, Metolachlor, Metoxychlor, Norflurazion, Pronomadide, Propachloro, trans-Nonachloro ".
By "Sum of Phosphorated Pesticides" we mean the "Sum of Azinfos Methyl, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Diazinone, Dimethoate, Fenitrothion, Fenthion, Malathion, Metidathion, Parathion Metil".
By "Chlordecone" we mean the "Sum of cis-Chlordecone, trans-Chlordecone".
By "Clourated Organic Solvents Sum" we mean the "Sum of Hexachlorobutadiene, Dibromochloromethane, Bromodichloromethane, Chloromethane, Vinichloride, Chloroform, Dichloromethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichlorethylene, Tetrachlorethylene, 1,1-Dichloroethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1- Triclotoethane, 1,2-Dichloropropane, 1,1,2-Trichloroethane, 1,2,3-Trichloropropane, 1,1,2,2-Tetrachloroethane, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Chlorobenzene, Hexachloroethane, Pentachloroethane ".
By "Sum of Aromatic Organic Compounds" we mean the "Sum of Benzene, Ethylbenzene, Styrene, Toluene, Xylenes, isopropylbenzene, 1,4- Dichlorobenzene, 1,4- Dichlorobenzene, Chlorobenzene.
"Nitrogen solvents" means the "Sum of 2-Nitrophenol, 4-Nitrophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,6-Dinitro-2-methylphenol".
Unless otherwise specified, "Sum" means the "sum of all analytes listed for the same family on this test report".

If the wording "Not determined" is shown for the parameter "Hydrocarbons C10 - C40", it indicates that this parameter, in relation to the test method indicated in the shared note of the ISS No. 0035653 of 06/08/2010 , is not quantified a cause of the interference that can be realized when the waste sample contains plastic materials, paper and / or materials treated with organic substances. This is because all the aforementioned materials are in a position to return non-correlable results (high values of heavy hydrocarbons deriving from the product characteristics of the materials and not from their hydrocarbon contamination) with the very purpose of the analysis intended for the "classification" of the waste.
The preparation of the test portions of the sample was performed according to the provisions of the technical standard UNI EN 15002: 2015 not subject to Accredia accreditation.
The mixing takes place by means of an overturning device at about 10 rpm.
The solid / liquid separation method is filtration.

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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# Attached Test Report n. 2158270-012
# Acid Neutralization Capacity
## Method: UNI CEN/TS 15364 2006

Start Test Date: 05/02/2024
End Test Date: 08/02/2024

| Test | 1 | 2 | LT | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $HNO_3$ Concentration (mol / L) | / | / | / | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $HNO_3$ Volume (mL) | / | / | / | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| mol $HNO_3$ (A) | 0,0000 | 0,0000 | 0 | 0,1117 | 0,4188 | 0,8377 | 6,7013 | 8,9351 | 13,4027 | 16,7533 | 20,1040 |
| NaOH Concentration (mol / L) | 0,1 | 0,1 | / | / | / | / | / | / | / | / | / |
| NaOH Volume (mL) | 60 | 15 | / | / | / | / | / | / | / | / | / |
| mol NaOH (B) | 0,0670 | 0,0168 | 0 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 | 0,0000 |
| ANC (mol / Kg) | -0,0670 | -0,0168 | 0 | 0,1117 | 0,4188 | 0,8377 | 6,7013 | 8,9351 | 13,4027 | 16,7533 | 20,1040 |
| mANC (mmol / kg) | -67,01 | -16,75 | 0 | 111,69 | 418,83 | 837,67 | 6701,33 | 8935,11 | 13402,67 | 16753,34 | 20104,00 |
| $w_{dr}$ (%) | 97,32 | 97,32 | 97,32 | 97,32 | 97,32 | 97,32 | 97,32 | 97,32 | 97,32 | 97,32 | 97,32 |
| un-dried mass of the test portion (g) | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| $M_d$ (g) | 89,53 | 89,53 | 90 | 89,53 | 89,53 | 89,53 | 89,53 | 89,53 | 89,53 | 89,53 | 89,53 |
| V (mL) | 895,34 | 895,34 | 900 | 895,34 | 895,34 | 895,34 | 895,34 | 895,34 | 895,34 | 895,34 | 895,34 |
| $V_L$ (mL) | 892,88 | 892,88 | 898 | 892,88 | 892,88 | 892,88 | 892,88 | 892,88 | 892,88 | 892,88 | 892,88 |
| $V_A$ (mL) | / | / | 0 | 2 | 7,5 | 15 | 120 | 160 | 240 | 300 | 360 |
| $V_B$ (mL) | 60 | 15 | 0 | / | / | / | / | / | / | / | / |
| $V_{demin}$ (mL) | 832,88 | 877,88 | 898 | 890,88 | 885,38 | 877,88 | 772,88 | 732,88 | 652,88 | 592,88 | 532,88 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH ($t_{0+4h}$) | 12,16 | 11,34 | pH LT | 6,89 | 6,21 | 5,98 | 4,97 | 4,67 | 4,36 | 3,97 | 3,26 |
| pH ($t_{0+44h}$) | 12,16 | 11,33 | | 7,14 | 6,53 | 6,24 | 5,19 | 5,00 | 4,70 | 4,17 | 3,94 |
| pH ($t_{0+48h}$) | 12,14 | 11,32 | 9,17 | 7,17 | 6,55 | 6,28 | 5,21 | 5,04 | 4,73 | 4,19 | 3,96 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ΔpH ($t_{0+4h}$)-($t_{0+44h}$) | 0,00 | 0,01 | / | -0,25 | -0,32 | -0,26 | -0,22 | -0,33 | -0,34 | -0,20 | -0,68 |
| ΔpH ($t_{0+44h}$)-($t_{0+48h}$) | 0,02 | 0,01 | | -0,03 | -0,02 | -0,04 | -0,02 | -0,04 | -0,03 | -0,02 | -0,02 |

**LT: Leaching Test without acid or base addition.**


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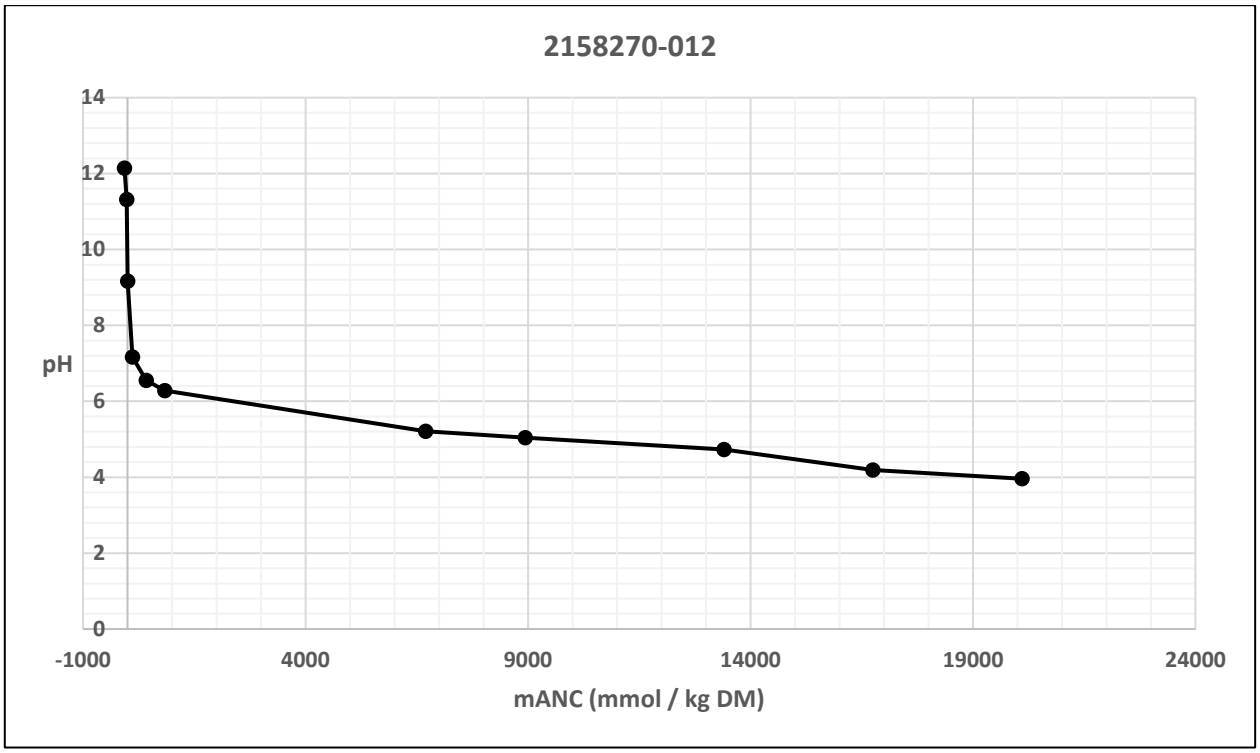


| Laboratory Technical Manager |
| --- |
| **Dott. Giuseppe Rocca**<br><br>**Chimico**<br>**Ordine Interprovinciale dei Chimici della Sicilia**<br>**Sigillo n°294** |

| Laboratory Director |
| --- |
| **Dott.ssa Margherita Augello**<br><br>**Ordine Nazionale dei Biologi**<br>**Albo professionale N.036132** |


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Test Report n°: **2159808-001** of: **13/05/2024**

Description: **Groundwater sample from sampling point named "A1W1" - Sampled by the customer - Profile 04 - Ecohive complex in Maghtab, Naxxar - ID SUNLAB 2023012014E-001**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2159808**

Sampling Point: \\

Sampling Place: \\

Sampling Date: **01-apr-24**

Sample Reception Date: **04-apr-24**

Test Start Date: **04-apr-24** Test Finish Date: **07-mag-24**

Sampling Method: **By the customer**

Sampler Technician: \\

Annex: **NO**

Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Antimonio | UNI EN ISO 17294-2:2016 | < 0,5 | µg/l | | | | |
| *Antimony* | | | | | | | |
| Arsenico | UNI EN ISO 17294-2:2016 | 0,77 | µg/l | 0,29 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN ISO 17294-2:2016 | < 0,5 | µg/l | | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN ISO 17294-2:2016 | 7,4 | µg/l | 1,1 | | | |
| *Chromium* | | | | | | | |
| Ferro | UNI EN ISO 17294-2:2016 | 63,0 | µg/l | 9,0 | | | |
| *Iron* | | | | | | | |
| Mercurio | UNI EN ISO 17294-2:2016 | < 0,1 | µg/l | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN ISO 17294-2:2016 | 5,0 | µg/l | 1,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN ISO 17294-2:2016 | 3,3 | µg/l | 0,5 | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2159808-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN ISO 17294-2:2016 | 7,2 | µg/l | 2,4 | | | |
| *Copper* | | | | | | | |
| Selenio | UNI EN ISO 17294-2:2016 | < 1 | µg/l | | | | |
| *Selenium* | | | | | | | |
| Zinco | UNI EN ISO 17294-2:2016 | 83 | µg/l | 15 | | | |
| *Zinc* | | | | | | | |
| **INQUINANTI INORGANICI** | | | | | | | |
| *INORGANIC POLLUTANTS* | | | | | | | |
| Fluoruri | APAT CNR IRSA 4020 Man 29 2003 | 415 | µg/l | 49 | | | |
| *Flourides* | | | | | | | |
| Solfati | APAT CNR IRSA 4020 Man 29 2003 | 357 | mg/l | 85 | | | |
| *Sulphates* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Benzene* | | | | | | | |
| Etilbenzene | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Ethylbenzene* | | | | | | | |
| Toluene | EPA 5030C 2003 + EPA 8260D 2018 | 2,48 | µg/l | 0,62 | | | |
| *Toluene* | | | | | | | |
| Stirene | EPA 5030C 2003 + EPA 8260D 2018 | 0,242 | µg/l | 0,074 | | | |
| *Styrene* | | | | | | | |
| para-Xilene | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *para-Xylene* | | | | | | | |
| **COMPOSTI ALIFATICI CLORURATI CANCEROGENI** | | | | | | | |
| *CARCINOGENIC CHLORINATED ALIPHATIC COMPOUNDS* | | | | | | | |
| Clorometano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Chloromethane* | | | | | | | |

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Continuation of Test Report n°: **2159808-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Triclorometano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Trichloromethane* | | | | | | | |
| Cloruro di Vinile | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Vinyl chloride* | | | | | | | |
| 1,2-Dicloroetano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *1,2-Dichloroethane* | | | | | | | |
| 1,1-Dicloroetilene | EPA 5030C 2003 + EPA 8260D 2018 | < 0,005 | µg/l | | | | |
| *1,1-Dichloroethylene* | | | | | | | |
| 1,1,2-Tricloroetano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *1,1,2-Trichloroethane* | | | | | | | |
| 1,2,3-Tricloropropano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,0001 | µg/l | | | | |
| *1,2,3-trichloropropane* | | | | | | | |
| Tetracloroetilene (Percloroetilene) | EPA 5030C 2003 + EPA 8260D 2018 | 2,49 | µg/l | 0,65 | | | |
| *Tetrachloroethylene* | | | | | | | |
| Esaclorobutadiene | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Hexachlorobutadiene* | | | | | | | |
| Sommatoria organoalogenati | EPA 5030C 2003 + EPA 8260D 2018 | 2,49 | µg/l | 0,87 | | | |
| *Summation Organohalogen* | | | | | | | |
| **COMPOSTI ALIFATICI ALOGENATI CANCEROGENI** | | | | | | | |
| *CARCINOGENIC HALOGENATED ALIPHATIC COMPOUNDS* | | | | | | | |
| Tribromometano (Bromoformio) | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Tribromomethane (Bromoform)* | | | | | | | |
| 1,2-Dibromoetano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,0001 | µg/l | | | | |
| *1,2-Dibromoethane* | | | | | | | |
| Dibromoclorometano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Dibromochloromethane* | | | | | | | |
| Bromodiclorometano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Bromodichloromethane* | | | | | | | |

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Continuation of Test Report n°: **2159808-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Benzo(a)anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Benzo(a)pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Benzo(b)fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Benzo(k)fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Fluorantene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Fluoranthene* | | | | | | | |
| Indeno(1,2,3-c,d)pirene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Indeno(1,2,3-c,d)pyrene* | | | | | | | |
| Pirene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Naphthalene* | | | | | | | |
| Sommatoria idrocarburi policiclici aromatici | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Summation polycyclic aromatic hydrocarbons* | | | | | | | |
| **IDROCARBURI** | | | | | | | |
| *HYDROCARBONS* | | | | | | | |

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Continuation of Test Report n°: **2159808-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Idrocarburi totali<br>*Total Hydrocarbons* | ISPRA Man 123 2015 | < 50 | [n-esano] µg/l | | | | |

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Continuation of Test Report n°: **2159808-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

The letter (B) shown next to the single parameter indicates that the test was performed at the secondary office. Otherwise, the test activities are carried out at the Headquarters

**Abbreviations:**

"L.B." = Lower Bound Criterion for the expression of summations
"U.B." = Upper Bound criterion for the expression of the summations
"M.B." = Medium Bound criterion for the expression of summations
"MDL" = Limit of Detection of the test method
"RL" = Reporting Limit Limit of quantification of the test method
"U.M." = Unit of Measure
"N.P." = Not perceptible
"R" = Percentage recovery value, in the case of residue / trace analysis
"SS" = dry matter
"TQ" = as it is
"N.A." = "Not applicable due to the matrix"
"N.D." = "Not determinable due to the absence of the necessary conditions for the execution of the test"
"Sampling Mod." = "Sampling Method"
"TC" = "Analyte determined in the eluate from the Leaching Test"

**Decision rules and declarations of conformity:**

At the time of contract signing or offer subscription, the decision rule to be applied for presenting results and its adherence to Norm and/or Specification requirements is defined with the customer.
Unless otherwise indicated, the conformity/non-conformity statement refers to the required parameters, analyzed and indicated in the Test Report.
If there is a reference to customer norms and/or specifications, values in bold indicate a result higher/lower than the reference values of those norms and/or specifications.
The conformity assessment of the result compared to the legal limit and/or specification should be understood as the result of the analysis from which the extended uncertainty value, according to the adopted decision rules, has been subtracted, added, or not considered. This result is rounded to the number of decimal places defined by the legal limit, regardless of the rounded values of the results reported in the Test Report.
In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

In the case of sampling not performed by the laboratory, the results obtained are considered to refer to the sample as received.
The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2159808-001**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

In case the test result is not assessable, due to a value below the Method Detection Limit (MDL), the Laboratory indicates in the result field of the Test Report "<MDL".
In case of residue / trace determination, the recovery is within the acceptable range of the test methods and is not used in the calculations, unless otherwise specified.
For chemical and microbiological tests, the measurement uncertainty is expressed as extended and with the same unit of measurement as the analytical result, and is calculated using a coverage factor K=2 and a measurement probability of 95%.
For microbiological tests on waters the uncertainty is expressed as confidence levels.
For microbiological tests on water intended for human consumption, the measurement uncertainty is calculated in compliance with Annex F of the standard ISO 29201: 2012.
For the microbiological tests on solid matrices, the Laboratory for the calculation of the measurement uncertainty takes into account only the reproducibility deviation SR of the laboratory in accordance with ISO 19036: 2019.
For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab. 2**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Indeno (1,2,3-cd) pyrene".
By "Organohalogenate summation" we mean the "Sum of Chloromethane, Trichloromethane (Chloroform), Vinyl Chloride, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichloroethylene, Tetrachlorethylene, Hexachlorobutadiene".
"1,2-Dichloroethylene" means the "Sum of cis-1,2-Dichloroethylene and trans-1,2-Dichloroethylene".
"Chloronitrobenzene" means the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene, 1-Chloro-4-Nitrobenzene".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"DDD, DDT, DDE" means the "Sum of 2,4'-DDD, 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE and 4 , 4'-DDT ".
"Sum of Pesticides" means the "Sum of 2,4'-DDD, 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4 ' -DDT, Alachlor, Aldrin, alpha-Chlordane, gamma-Chlordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane (Lindane), Atrazine, Dieldrin and Endrin ".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

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Test Report n°: **2159808-002** of: **13/05/2024**

Description: **Groundwater sample from sampling point named "J1W1" - Sampled by the customer - Profile 04 - Ecohive complex in Maghtab, Naxxar - ID SUNLAB 2023012014E-004**

**Client:**
**AIS Environment Ltd**
**AIS House, 18, St. John Street, Fgura, FGR 1447, Malta**
**AIS House, Malta**

Reception n°: **2159808**
Sampling Point: \\
Sampling Place: \\
Sampling Date: **01-apr-24**
Sample Reception Date: **04-apr-24**
Test Start Date: **04-apr-24** Test Finish Date: **07-mag-24**
Sampling Method: **By the customer**
Sampler Technician: \\
Annex: **NO**
Reference for the Limits: ///

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **PARAMETRI CHIMICI** | | | | | | | |
| *CHEMICAL PARAMETERS* | | | | | | | |
| **METALLI** | | | | | | | |
| *METALS* | | | | | | | |
| Antimonio | UNI EN ISO 17294-2:2016 | < 0,5 | µg/l | | | | |
| *Antimony* | | | | | | | |
| Arsenico | UNI EN ISO 17294-2:2016 | 1,90 | µg/l | 0,40 | | | |
| *Arsenic* | | | | | | | |
| Cadmio | UNI EN ISO 17294-2:2016 | < 0,5 | µg/l | | | | |
| *Cadmium* | | | | | | | |
| Cromo | UNI EN ISO 17294-2:2016 | 22,0 | µg/l | 3,0 | | | |
| *Chromium* | | | | | | | |
| Ferro | UNI EN ISO 17294-2:2016 | 220,0 | µg/l | 30,0 | | | |
| *Iron* | | | | | | | |
| Mercurio | UNI EN ISO 17294-2:2016 | < 0,1 | µg/l | | | | |
| *Mercury* | | | | | | | |
| Nichel | UNI EN ISO 17294-2:2016 | 13,0 | µg/l | 2,0 | | | |
| *Nickel* | | | | | | | |
| Piombo | UNI EN ISO 17294-2:2016 | < 0,5 | µg/l | | | | |
| *Lead* | | | | | | | |

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Continuation of Test Report n°: **2159808-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Rame | UNI EN ISO 17294-2:2016 | < 5 | µg/l | | | | |
| *Copper* | | | | | | | |
| Selenio | UNI EN ISO 17294-2:2016 | < 1 | µg/l | | | | |
| *Selenium* | | | | | | | |
| Zinco | UNI EN ISO 17294-2:2016 | < 10 | µg/l | | | | |
| *Zinc* | | | | | | | |
| **INQUINANTI INORGANICI** | | | | | | | |
| *INORGANIC POLLUTANTS* | | | | | | | |
| Fluoruri | APAT CNR IRSA 4020 Man 29 2003 | 497 | µg/l | 59 | | | |
| *Flourides* | | | | | | | |
| Solfati | APAT CNR IRSA 4020 Man 29 2003 | 455 | mg/l | 109 | | | |
| *Sulphates* | | | | | | | |
| **COMPOSTI ORGANICI AROMATICI** | | | | | | | |
| *AROMATIC ORGANIC COMPOUNDS* | | | | | | | |
| Benzene | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Benzene* | | | | | | | |
| Etilbenzene | EPA 5030C 2003 + EPA 8260D 2018 | 0,153 | µg/l | 0,052 | | | |
| *Ethylbenzene* | | | | | | | |
| Toluene | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Toluene* | | | | | | | |
| Stirene | EPA 5030C 2003 + EPA 8260D 2018 | 0,230 | µg/l | 0,071 | | | |
| *Styrene* | | | | | | | |
| para-Xilene | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *para-Xylene* | | | | | | | |
| **COMPOSTI ALIFATICI CLORURATI CANCEROGENI** | | | | | | | |
| *CARCINOGENIC CHLORINATED ALIPHATIC COMPOUNDS* | | | | | | | |
| Clorometano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Chloromethane* | | | | | | | |

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Continuation of Test Report n°: **2159808-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Triclorometano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Trichloromethane* | | | | | | | |
| Cloruro di Vinile | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Vinyl chloride* | | | | | | | |
| 1,2-Dicloroetano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *1,2-Dichloroethane* | | | | | | | |
| 1,1-Dicloroetilene | EPA 5030C 2003 + EPA 8260D 2018 | < 0,005 | µg/l | | | | |
| *1,1-Dichloroethylene* | | | | | | | |
| 1,1,2-Tricloroetano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *1,1,2-Trichloroethane* | | | | | | | |
| 1,2,3-Tricloropropano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,0001 | µg/l | | | | |
| *1,2,3-trichloropropane* | | | | | | | |
| Tetracloroetilene (Percloroetilene) | EPA 5030C 2003 + EPA 8260D 2018 | 1,25 | µg/l | 0,33 | | | |
| *Tetrachloroethylene* | | | | | | | |
| Esaclorobutadiene | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Hexachlorobutadiene* | | | | | | | |
| Sommatoria organoalogenati | EPA 5030C 2003 + EPA 8260D 2018 | 1,25 | µg/l | 0,44 | | | |
| *Summation Organohalogen* | | | | | | | |
| **COMPOSTI ALIFATICI ALOGENATI CANCEROGENI** | | | | | | | |
| *CARCINOGENIC HALOGENATED ALIPHATIC COMPOUNDS* | | | | | | | |
| Tribromometano (Bromoformio) | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Tribromomethane (Bromoform)* | | | | | | | |
| 1,2-Dibromoetano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,0001 | µg/l | | | | |
| *1,2-Dibromoethane* | | | | | | | |
| Dibromoclorometano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Dibromochloromethane* | | | | | | | |
| Bromodiclorometano | EPA 5030C 2003 + EPA 8260D 2018 | < 0,01 | µg/l | | | | |
| *Bromodichloromethane* | | | | | | | |

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Continuation of Test Report n°: **2159808-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| **IDROCARBURI POLICICLICI AROMATICI** | | | | | | | |
| *POLYCYCLIC AROMATIC HYDROCARBONS* | | | | | | | |
| Benzo(a)antracene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Benzo(a)anthracene* | | | | | | | |
| Benzo(a)pirene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Benzo(a)pyrene* | | | | | | | |
| Benzo(b)fluorantene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Benzo(b)fluoranthene* | | | | | | | |
| Benzo(k)fluorantene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Benzo(k)fluoranthene* | | | | | | | |
| Benzo(g,h,i)perilene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Benzo(g,h,i)perylene* | | | | | | | |
| Crisene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Chrysene* | | | | | | | |
| Dibenzo(a,h)antracene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Dibenzo(a,h)anthracene* | | | | | | | |
| Fluorantene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Fluoranthene* | | | | | | | |
| Indeno(1,2,3-c,d)pirene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Indeno(1,2,3-c,d)pyrene* | | | | | | | |
| Pirene | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Pyrene* | | | | | | | |
| Naftalene (C10) | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Naphthalene* | | | | | | | |
| Sommatoria idrocarburi policiclici aromatici | EPA 3510C 1996 + EPA 8270E 2018 | < 0,001 | µg/l | | | | |
| *Summation polycyclic aromatic hydrocarbons* | | | | | | | |
| **IDROCARBURI** | | | | | | | |
| *HYDROCARBONS* | | | | | | | |

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Continuation of Test Report n°: **2159808-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|
| Idrocarburi totali<br>*Total Hydrocarbons* | ISPRA Man 123 2015 | < 50 | [n-esano] µg/l | | | | |

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Continuation of Test Report n°: **2159808-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Locations:**
**Headquarters (A):** Via Pio La Torre n° 13 Area P.I.P. - 92013 Menfi (AG)
**Secondary Office (B):** C.da Piana del Signore - Strada provinciale n° 82 - 93012 Gela (CL)

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**Abbreviations:**

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In the case of Waste matrices for the purpose of admissibility in disposal/recovery plants, the conformity assessment will not consider rounding to the number of decimal places specified by the legal limit.

**DECLARATION OF CONFORMITY / NON-CONFORMITY to the requirements of the Standard and / or Specification:**

//

**Sampling Carried out by the customer / applicant:**

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The Laboratory declines all responsibility in the case of sampling carried out by the customer / applicant.
The customer remains the only person responsible for the representativeness of the sample received / delivered to the laboratory with respect to the specific lot / batch to be analyzed.
The information provided by the customer (description of the sample, date and place of sampling, lot, etc) are reported in the section of the test report dedicated to the insertion of the identification information of the sample.
The laboratory declines all responsibility for the validity of the analytical results when the customer requests that an object be tested while recognizing the presence of a deviation (sample rate, temperature, etc.) with respect to the conditions specified by the laboratory (acceptance with reserve).
The Laboratory declines its responsibility for the results obtained from the calculation made using the data provided by the customer (Volumes, Rates, Flows, Temperature, Duration of sampling, etc).
The acquired information is explained through a note associated with the analyte / group of analytes, making it clear that the result was obtained by calculation made on the basis of the measure declared by the client / applicant.

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Continuation of Test Report n°: **2159808-002**

| Tests | Method | Result | U.O.M. | Uncertainty | Recovery [%] | Lim. Min. | Lim. Max. |
|---|---|---|---|---|---|---|---|

**Technical information**

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For microbiological tests on waters the uncertainty is expressed as confidence levels.
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For microbiological analyses of water samples according to Iso 8199:2018 standard, the following rules apply:
• If the result is equal to 0 cfu (colony-forming units) this means the number of microorganisms is lower than 1 in the analyzed volume.
• If the result is ≤ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
• If the result s between 3 cfu and 9 cfu (colony-forming units) it means the estimated number of microorganisms.
For olfactometric tests, the measurement uncertainty interval, calculated at the confidence level p = 95% and with coverage factor k = 2, is not symmetrical around the central value because the odor concentration has a log-normal distribution.
For the determination of airborne fibers, the fiducial, upper (LFS) and lower (LFI) limits are defined at a confidence level of 95%.
The analytical results are expressed in compliance with the provisions of the relevant legislation unless otherwise requested by the customer / applicant.
Unless otherwise indicated, the summations are calculated using the Lower Bound criterion (L.B.)
Information about sampling uncertainty is available at the laboratory.
This test report concerns the sample under test and it cannot be partially reproduced, without prior written approval by the C.A.D.A. s.n.c.
The signatures at the bottom of the test report indicate the end of the test report.

**Notes for tests D. Lgs. 152/06 and subsequent amendments and additions.Tab. 2**

By "Sum of Polycyclic Aromatic Hydrocarbons" we mean the "Sum of Benzo (b) fluoranthene, Benzo (k) fluoranthene, Benzo (g, h, i) perylene, Indeno (1,2,3-cd) pyrene".
By "Organohalogenate summation" we mean the "Sum of Chloromethane, Trichloromethane (Chloroform), Vinyl Chloride, 1,2-Dichloroethane, 1,1-Dichloroethylene, Trichloroethylene, Tetrachlorethylene, Hexachlorobutadiene".
"1,2-Dichloroethylene" means the "Sum of cis-1,2-Dichloroethylene and trans-1,2-Dichloroethylene".
"Chloronitrobenzene" means the "Sum of 1-Chloro-2-Nitrobenzene, 1-Chloro-3-Nitrobenzene, 1-Chloro-4-Nitrobenzene".
By "Clordane" we mean the "Sum of alpha-Chlordane and gamma-Clordane".
"DDD, DDT, DDE" means the "Sum of 2,4'-DDD, 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE and 4 , 4'-DDT ".
"Sum of Pesticides" means the "Sum of 2,4'-DDD, 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4 ' -DDT, Alachlor, Aldrin, alpha-Chlordane, gamma-Chlordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane (Lindane), Atrazine, Dieldrin and Endrin ".

| Laboratory Technical Manager | Laboratory Director |
|---|---|
| **Dott. Giuseppe Rocca**<br>Chimico<br>Ordine Interprovinciale dei Chimici della Sicilia<br>Sigillo N.294 | **Dott.ssa Margherita Augello**<br>Ordine Nazionale dei Biologi<br>Albo professionale N.036132 |

**Document with advanced digital signature in accordance with current legislation.**

The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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# APPENDIX II: WORKINGS

**Replicate A1S1**

| Metal | | | Compound | | |
|---|---|---|---|---|---|
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 2.8 | Arsenic acid and its salts | 142 | 0.000530133 |
| Cadmium | 112 | 0.2 | Cadmium oxide | 128 | 2.28571E-05 |
| Chromium | 52 | 22 | Chromium III chromate | 452 | 0.019123077 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 10 | Nickel Monoxide | 75 | 0.001271186 |
| Lead | 207 | 3.2 | Tetraethyl lead (Lead alkyls) | 323 | 0.000499324 |
| Copper | 65 | 10 | Copper (I) oxide | 143 | 0.0022 |
| Zinc | 64 | 27 | Zinc oxide | 81 | 0.003417188 |
| Benzo(a)pyrene | 252 | 0.18 | Benzo(a)pyrene | 252 | 0.000018 |
| Benzo(k)fluoranthene | 252 | 0.11 | Benzo(k)fluoranthene | 252 | 0.000011 |
| Benzo (g,h,i) perylene | 276 | 0.096 | Benzo (g,h,i) perylene | 276 | 0.0000096 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.086 | Indeno (1,2,3-cd) pyrene | 290 | 0.0000086 |
| Fluoranthene | 202 | 0.28 | Fluoranthene | 202 | 0.000028 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

**Replicate A1S2**

| Metal | | | Compound | | |
|---|---|---|---|---|---|
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 3.1 | Arsenic acid and its salts | 142 | 0.000586933 |
| Cadmium | 112 | 0.2 | Cadmium oxide | 128 | 2.28571E-05 |
| Chromium | 52 | 22 | Chromium III chromate | 452 | 0.019123077 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 11 | Nickel Monoxide | 75 | 0.001398305 |
| Lead | 207 | 3.7 | Tetraethyl lead (Lead alkyls) | 323 | 0.000577343 |
| Copper | 65 | 33 | Copper (I) oxide | 143 | 0.00726 |
| Zinc | 64 | 28 | Zinc oxide | 81 | 0.00354375 |
| Benzo(a)pyrene | 252 | 0.11 | Benzo(a)pyrene | 252 | 0.000011 |
| Benzo(k)fluoranthene | 252 | 0.035 | Benzo(k)fluoranthene | 252 | 0.0000035 |
| Benzo (g,h,i) perylene | 276 | 0.063 | Benzo (g,h,i) perylene | 276 | 0.0000063 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.052 | Indeno (1,2,3-cd) pyrene | 290 | 0.0000052 |
| Fluoranthene | 202 | 0.093 | Fluoranthene | 202 | 0.0000093 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

**Replicate A1M1**

| Metal | | | Compound | | |
|---|---|---|---|---|---|
| Chemical | RAM | onc (mg/kg | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 5.7 | Arsenic acid and its salts | 142 | 0.0010792 |
| Cadmium | 112 | 0.28 | Cadmium oxide | 128 | 0.000032 |
| Chromium | 52 | 48 | Chromium III chromate | 452 | 0.041723077 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 23 | Nickel Monoxide | 75 | 0.002923729 |
| Lead | 207 | 6.7 | Tetraethyl lead (Lead alkyls) | 323 | 0.001045459 |
| Copper | 65 | 17 | Copper (I) oxide | 143 | 0.00374 |
| Zinc | 64 | 60 | Zinc oxide | 81 | 0.00759375 |
| Benzo(a)p | 252 | 0.062 | Benzo(a)pyrene | 252 | 0.0000062 |
| Benzo(k)fl | 252 | 0.031 | Benzo(k)fluoranthene | 252 | 0.0000031 |
| Benzo (g,h | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1, | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthe | 202 | 0.16 | Fluoranthene | 202 | 0.000016 |
| Total PCB | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total orga | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

**Replicate A1M2**

| Metal | | | Compound | | |
|---|---|---|---|---|---|
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 5.5 | Arsenic acid and its salts | 142 | 0.001041333 |
| Cadmium | 112 | 0.31 | Cadmium oxide | 128 | 3.54286E-05 |
| Chromium | 52 | 46 | Chromium III chromate | 452 | 0.039984615 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 22 | Nickel Monoxide | 75 | 0.00279661 |
| Lead | 207 | 6.3 | Tetraethyl lead (Lead alkyls) | 323 | 0.000983043 |
| Copper | 65 | 17 | Copper (I) oxide | 143 | 0.00374 |
| Zinc | 64 | 59 | Zinc oxide | 81 | 0.007467188 |
| Benzo(a)pyrene | 252 | 0.055 | Benzo(a)pyrene | 252 | 0.0000055 |
| Benzo(k)fluoranthene | 252 | 0.028 | Benzo(k)fluoranthene | 252 | 0.0000028 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.12 | Fluoranthene | 202 | 0.000012 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Metal compound | H-statement | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H271 | H300 | H301 | H302 | H310 | H312 | H314 | H315 | H317 | H318 | H319 | H330 | H331 | H332 | H340 | H341 | H350 | H351 | H360 | H361f-d | H372 | H373 | H400 | H401 | H410 | H413 |
| Arsenic acid and its salts | | | Y | | | | | | | | | | Y | | | | Y | | | | | | Y | | Y | |
| Cadmium oxide | | | | | | | | | | | | Y | | | | Y | Y | | | Y | Y | | Y | | Y | |
| Chromium III chromate | Y | | | | | | Y | | Y | | | | | | | | Y | | | | | | Y | | Y | |
| Dimethyl mercury | | Y | | | Y | | | | | | | Y | | | | | | | | | | Y | Y | | Y | |
| Nickel Monoxide | | | | | | | | | Y | | | | | | | | Y | | | | Y | | | | | Y |
| Tetraethyl lead (Lead alkyls) | | Y | | | Y | | | | | | | Y | | | | | | | Y | | | Y | Y | | Y | |
| Copper (I) oxide | | | | Y | | | | | | Y | | | | Y | | | | | | | | | Y | | Y | |
| Zinc oxide | | | | | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Benzo(a)pyrene | | | | | | | | | Y | | | | | | Y | | Y | | Y | | | | Y | | Y | |
| Benzo(k)fluoranthene | | | | | | | | | | | | | | | | | Y | | | | | | Y | | Y | |
| Benzo (g,h,i) perylene | | | | | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Indeno (1,2,3-cd) pyrene | | | | | | | | | | | | | | | | | | Y | | | | | | | | |
| Fluoranthene | | | | Y | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Total PCB content | | | | | | | | | | | | | | | | | | | | | | Y | Y | | Y | |
| Total organic carbon | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tributyltin oxide | | | Y | | | Y | | Y | | | Y | | | | | | | | Y | | Y | | Y | | Y | |
| **TOTALA1S1 (% conc)** | **0.019** | **0.001** | **0.001** | **0.002** | **0.001** | **0.001** | **0.019** | **0.001** | **0.020** | **0.002** | **0.001** | **0.001** | **0.001** | **0.002** | **0.000** | **0.000** | **0.021** | **0.000** | **0.001** | **0.000** | **0.002** | **0.001** | **0.026** | **0.000** | **0.026** | **0.001** |
| **TOTAL A1S2 (% conc)** | **0.019** | **0.001** | **0.001** | **0.007** | **0.001** | **0.001** | **0.019** | **0.001** | **0.021** | **0.007** | **0.001** | **0.001** | **0.001** | **0.007** | **0.000** | **0.000** | **0.021** | **0.000** | **0.001** | **0.000** | **0.002** | **0.001** | **0.032** | **0.000** | **0.032** | **0.001** |
| **TOTAL A1M1 (% conc)** | **0.042** | **0.001** | **0.002** | **0.004** | **0.001** | **0.001** | **0.042** | **0.001** | **0.045** | **0.004** | **0.001** | **0.001** | **0.001** | **0.004** | **0.000** | **0.000** | **0.046** | **0.000** | **0.002** | **0.000** | **0.003** | **0.001** | **0.056** | **0.000** | **0.056** | **0.003** |
| **TOTAL A1M2 (% conc)** | **0.040** | **0.001** | **0.002** | **0.004** | **0.001** | **0.001** | **0.040** | **0.001** | **0.043** | **0.004** | **0.001** | **0.001** | **0.001** | **0.004** | **0.000** | **0.000** | **0.044** | **0.000** | **0.001** | **0.000** | **0.003** | **0.001** | **0.054** | **0.000** | **0.054** | **0.003** |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Code | Description | Classification SL 549.63 | Notes | Classification | | Classification | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | A1S1 | A1S2 | A1M1 | A1M2 | | |
| HP1 | Explosive | Presence or absence of H200, H201, H202, H203, H204, H240, H241 | | N/A | N/A | N/A | N/A | | |
| HP2 | Oxidising | Presence or absence of H270, H271, H272 and the source is not marine | Not marine | NH | NH | NH | NH | | |
| HP3 | Flammable | Presence or absence of H220, H221, H222, H223, H224, H225, H226, H228, H242, H250, H251, H250, H260, H261 | | N/A | N/A | N/A | N/A | | |
| HP4 | Irritant | Sum of H314 between 1% and 5%<br>Sum of H318 > 1%<br>Sum of H315, H319 > 10% | If sum of H314 > 5%, then HP8 will apply so HP4 would not apply | NH | NH | NH | NH | | |
| HP5 | Specific target organ toxicity | STOT SE 1: Sum of H370 > 1%<br>STOT SE 2: Sum of H371 > 10%<br>STOT SE 3: Sum of H335 > 20%<br>STOT SE 1: Sum of H372 > 1%<br>STOT SE 2: Sum of H373 > 10%<br>Asp tox 1: Sum of H304 > 10% | | NH | NH | NH | NH | | |
| HP6 | Acute toxicity | Contains individual substances classified as H300, H301, H310, H311, H330, H331 above 0.1% or H302, H312 and H332 above 1% cut-off values? | If False, it is not included in the sum of the concentrations for that hazard category code. | FALSE | FALSE | FALSE | FALSE | | |
| | | If the above is true, the waste is hazardous if: sum of H300 ≥ 0.1% (Acute Tox. 1 oral) | | NH | NH | NH | NH | | |
| | | or sum of H300 ≥ 0.25% (Acute Tox. 2 oral) | | NH | NH | NH | NH | | |
| | | or sum of H301 ≥ 5% | | NH | NH | NH | NH | | |
| | | or sum of H302 ≥ 25% | | NH | NH | NH | NH | | |
| | | or sum of H310 ≥ 0.25 (Acute Tox. 1 Derm) | | NH | NH | NH | NH | | |
| | | or sum of H310 ≥ 2.5% (Acute Tox. 2 Derm) | | NH | NH | NH | NH | | |
| | | or sum of H311 ≥ 15% | | N/A | N/A | N/A | N/A | | |
| | | or sum of H312 ≥ 55% | | NH | NH | NH | NH | | |
| | | or sum of H330 ≥ 0.1% (Acute Tox 1. Inhal) | | NH | NH | NH | NH | | |
| | | or sum of H330 ≥ 0.5% (Acute Tox 2. Inhal) | | NH | NH | NH | NH | | |
| | | or sum of H331 ≥ 3.5% | | NH | NH | NH | NH | | |
| | | or sum of H332 ≥ 22.5% | | NH | NH | NH | NH | | |
| HP7 | Carcinogenic | Carc. 1: Sum of H350 > 0.1%<br>Carc. 2: Sum of H351 > 1% | | NH | NH | NH | NH | | |
| HP8 | Corrosive | Sum of H314 >5% | Concentrations between 1 and 5% would be considered as HP4 | NH | NH | NH | NH | | |
| HP9 | Infectious | Containing microorganisms or toxins | | N/A | N/A | N/A | N/A | | |
| HP10 | Toxic for reproduction | Repr. 1: Sum of H360 > 0.3%<br>Repr. 2: Sum of H361 > 3% | | NH | NH | NH | NH | | |
| HP11 | Mutagenic | Muta 1: Sum of H340 > 0.1%<br>Muta 2: Sum of H341 > 1% | | NH | NH | NH | NH | | |
| HP12 | Acute toxic gas | Presence or absence of EUH029, EUH031, EUH032 | | N/A | N/A | N/A | N/A | | |
| HP13 | Sensitising | Sum of H317, H334 > 10% | | NH | NH | NH | NH | | |
| HP14 | Ecotoxic | Sum of H400 and H410 > 25% | Immediate or delayed risks for the environment | NH | NH | NH | NH | | |
| HP15 | Hazardous property not displayed in original waste | Presence or absence of H205, EUH001, EUH019, EUH044 | | N/A | N/A | N/A | N/A | | |

| Replicate D1S1 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 2.6 | Arsenic acid and its salts | 142 | 0.000492267 |
| Cadmium | 112 | 0.26 | Cadmium oxide | 128 | 2.97143E-05 |
| Chromium | 52 | 37 | Chromium III chromate | 452 | 0.032161538 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 11 | Nickel Monoxide | 75 | 0.001398305 |
| Lead | 207 | 36 | Tetraethyl lead (Lead alkyls) | 323 | 0.005617391 |
| Copper | 65 | 30 | Copper (I) oxide | 143 | 0.0066 |
| Zinc | 64 | 70 | Zinc oxide | 81 | 0.008859375 |
| Benzo(a)pyrene | 252 | 0.025 | Benzo(a)pyrene | 252 | 0.0000025 |
| Benzo(k)fluoranthene | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.048 | Fluoranthene | 202 | 0.0000048 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.28 | Total organic carbon | 1 | 0.000028 |
| Tin | 119 | 1.1 | Tributyltin oxide | 596 | 0.000550924 |

| Replicate D1S2 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 3.3 | Arsenic acid and its salts | 142 | 0.0006248 |
| Cadmium | 112 | 0.34 | Cadmium oxide | 128 | 3.88571E-05 |
| Chromium | 52 | 25 | Chromium III chromate | 452 | 0.021730769 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 15 | Nickel Monoxide | 75 | 0.00190678 |
| Lead | 207 | 17 | Tetraethyl lead (Lead alkyls) | 323 | 0.002652657 |
| Copper | 65 | 23 | Copper (I) oxide | 143 | 0.00506 |
| Zinc | 64 | 52 | Zinc oxide | 81 | 0.00658125 |
| Benzo(a)pyrene | 252 | 0.039 | Benzo(a)pyrene | 252 | 0.0000039 |
| Benzo(k)fluoranthene | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.085 | Fluoranthene | 202 | 0.0000085 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 2.1 | Tributyltin oxide | 596 | 0.001051765 |

| Replicate D1M1 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | onc (mg/kg | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 3.5 | Arsenic acid and its salts | 142 | 0.000662667 |
| Cadmium | 112 | 0.24 | Cadmium oxide | 128 | 2.74286E-05 |
| Chromium | 52 | 13 | Chromium III chromate | 452 | 0.0113 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 9 | Nickel Monoxide | 75 | 0.001144068 |
| Lead | 207 | 9 | Tetraethyl lead (Lead alkyls) | 323 | 0.001404348 |
| Copper | 65 | 7 | Copper (I) oxide | 143 | 0.00154 |
| Zinc | 64 | 22 | Zinc oxide | 81 | 0.002784375 |
| Benzo(a)p | 252 | 0.019 | Benzo(a)pyrene | 252 | 0.0000019 |
| Benzo(k)flu | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1, | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthe | 202 | 0.035 | Fluoranthene | 202 | 0.0000035 |
| Total PCB | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total orga | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate D1M2 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 3.1 | Arsenic acid and its salts | 142 | 0.000586933 |
| Cadmium | 112 | 0.26 | Cadmium oxide | 128 | 2.97143E-05 |
| Chromium | 52 | 16 | Chromium III chromate | 452 | 0.013907692 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 10 | Nickel Monoxide | 75 | 0.001271186 |
| Lead | 207 | 24 | Tetraethyl lead (Lead alkyls) | 323 | 0.003744928 |
| Copper | 65 | 11 | Copper (I) oxide | 143 | 0.00242 |
| Zinc | 64 | 32 | Zinc oxide | 81 | 0.00405 |
| Benzo(a)pyrene | 252 | 0.17 | Benzo(a)pyrene | 252 | 0.000017 |
| Benzo(k)fluoranthene | 252 | 0.062 | Benzo(k)fluoranthene | 252 | 0.0000062 |
| Benzo (g,h,i) perylene | 276 | 0.05 | Benzo (g,h,i) perylene | 276 | 0.000005 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.055 | Indeno (1,2,3-cd) pyrene | 290 | 0.0000055 |
| Fluoranthene | 202 | 0.41 | Fluoranthene | 202 | 0.000041 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.19 | Total organic carbon | 1 | 0.000019 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate D1D1 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 3.5 | Arsenic acid and its salts | 142 | 0.000662667 |
| Cadmium | 112 | 0.23 | Cadmium oxide | 128 | 2.62857E-05 |
| Chromium | 52 | 10 | Chromium III chromate | 452 | 0.008692308 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 8 | Nickel Monoxide | 75 | 0.001016949 |
| Lead | 207 | 5.4 | Tetraethyl lead (Lead alkyls) | 323 | 0.000842609 |
| Copper | 65 | 6 | Copper (I) oxide | 143 | 0.00132 |
| Zinc | 64 | 14 | Zinc oxide | 81 | 0.001771875 |
| Benzo(a)pyrene | 252 | 0.017 | Benzo(a)pyrene | 252 | 0.0000017 |
| Benzo(k)fluoranthene | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.03 | Fluoranthene | 202 | 0.000003 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate D1D2 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | onc (mg/kg | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 2.9 | Arsenic acid and its salts | 142 | 0.000549067 |
| Cadmium | 112 | 0.21 | Cadmium oxide | 128 | 0.000024 |
| Chromium | 52 | 10 | Chromium III chromate | 452 | 0.008692308 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 8 | Nickel Monoxide | 75 | 0.001016949 |
| Lead | 207 | 8 | Tetraethyl lead (Lead alkyls) | 323 | 0.001248309 |
| Copper | 65 | 7 | Copper (I) oxide | 143 | 0.00154 |
| Zinc | 64 | 17 | Zinc oxide | 81 | 0.002151563 |
| Benzo(a)p | 252 | 0.02 | Benzo(a)pyrene | 252 | 0.000002 |
| Benzo(k)flu | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1, | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthe | 202 | 0.03 | Fluoranthene | 202 | 0.000003 |
| Total PCB | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total orga | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 2.1 | Tributyltin oxide | 596 | 0.001051765 |

| Metal compound | H-statement | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H271 | H300 | H301 | H302 | H310 | H312 | H314 | H315 | H317 | H318 | H319 | H330 | H331 | H332 | H340 | H341 | H350 | H351 | H360 | H361f-d | H372 | H373 | H400 | H401 | H410 | H413 |
| Arsenic acid and its salts | | | Y | | | | | | | | | | Y | | | | Y | | | | | | Y | | Y | |
| Cadmium oxide | | | | | | | | | | | | Y | | | | Y | Y | | | Y | Y | | Y | | Y | |
| Chromium III chromate | Y | | | | | | Y | | Y | | | | | | | | Y | | | | | | Y | | Y | |
| Dimethyl mercury | | Y | | | Y | | | | | | | Y | | | | | | | | | | Y | Y | | Y | |
| Nickel Monoxide | | | | | | | | | Y | | | | | | | | Y | | | | Y | | | | | Y |
| Tetraethyl lead (Lead alkyls) | | Y | | | Y | | | | | | | Y | | | | | | | Y | | | Y | Y | | Y | |
| Copper (I) oxide | | | | Y | | | | | | Y | | | | Y | | | | | | | | | Y | | Y | |
| Zinc oxide | | | | | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Benzo(a)pyrene | | | | | | | | | Y | | | | | | Y | | Y | | Y | | | | Y | | Y | |
| Benzo(k)fluoranthene | | | | | | | | | | | | | | | | | Y | | | | | | Y | | Y | |
| Benzo (g,h,i) perylene | | | | | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Indeno (1,2,3-cd) pyrene | | | | | | | | | | | | | | | | | | Y | | | | | | | | |
| Fluoranthene | | | | Y | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Total PCB content | | | | | | | | | | | | | | | | | | | | | | Y | Y | | Y | |
| Total organic carbon | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tributyltin oxide | | | Y | | | Y | | Y | | | Y | | | | | | | | Y | | Y | | Y | | Y | |
| **TOTAL D1S1 (% conc)** | **0.032** | **0.006** | **0.001** | **0.007** | **0.006** | **0.001** | **0.032** | **0.001** | **0.034** | **0.007** | **0.001** | **0.006** | **0.000** | **0.007** | **0.000** | **0.000** | **0.034** | **0.000** | **0.006** | **0.000** | **0.002** | **0.006** | **0.054** | **0.000** | **0.054** | **0.001** |
| **TOTAL D1S2 (% conc)** | **0.022** | **0.003** | **0.002** | **0.005** | **0.003** | **0.001** | **0.022** | **0.001** | **0.024** | **0.005** | **0.001** | **0.003** | **0.001** | **0.005** | **0.000** | **0.000** | **0.024** | **0.000** | **0.004** | **0.000** | **0.003** | **0.003** | **0.038** | **0.000** | **0.038** | **0.002** |
| **TOTAL D1M1 (% conc)** | **0.011** | **0.001** | **0.001** | **0.002** | **0.001** | **0.001** | **0.011** | **0.001** | **0.012** | **0.002** | **0.001** | **0.001** | **0.001** | **0.002** | **0.000** | **0.000** | **0.013** | **0.000** | **0.002** | **0.000** | **0.002** | **0.001** | **0.018** | **0.000** | **0.018** | **0.001** |
| **TOTAL D1M2 (% conc)** | **0.014** | **0.004** | **0.001** | **0.002** | **0.004** | **0.001** | **0.014** | **0.001** | **0.015** | **0.002** | **0.001** | **0.004** | **0.001** | **0.002** | **0.000** | **0.000** | **0.016** | **0.000** | **0.004** | **0.000** | **0.002** | **0.004** | **0.025** | **0.000** | **0.025** | **0.001** |
| **TOTAL D1D1 (% conc)** | **0.009** | **0.001** | **0.001** | **0.001** | **0.001** | **0.001** | **0.009** | **0.001** | **0.010** | **0.001** | **0.001** | **0.001** | **0.001** | **0.001** | **0.000** | **0.000** | **0.010** | **0.000** | **0.001** | **0.000** | **0.002** | **0.001** | **0.014** | **0.000** | **0.014** | **0.001** |
| **TOTAL D1D2 (% conc)** | **0.009** | **0.001** | **0.002** | **0.002** | **0.001** | **0.001** | **0.009** | **0.001** | **0.010** | **0.002** | **0.001** | **0.001** | **0.001** | **0.002** | **0.000** | **0.000** | **0.010** | **0.000** | **0.002** | **0.000** | **0.002** | **0.001** | **0.015** | **0.000** | **0.015** | **0.001** |

| Code | Description | Classification SL 549.63 | Notes | Classification | | Classification | | Classification | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | D1S1 | D1S2 | D1M1 | D1M2 | D1D1 | D1D2 |
| HP1 | Explosive | Presence or absence of H200, H201, H202, H203, H204, H240, H241 | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP2 | Oxidising | Presence or absence of H270, H271, H272 and the source is not marine | Not marine | NH | NH | NH | NH | NH | NH |
| HP3 | Flammable | Presence or absence of H220, H221, H222, H223, H224, H225, H226, H228, H242, H250, H251, H250, H260, H261 | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP4 | Irritant | Sum of H314 between 1% and 5%<br>Sum of H318 > 1%<br>Sum of H315, H319 > 10% | If sum of H314 > 5%, then HP8 will apply so HP4 would not apply | NH | NH | NH | NH | NH | NH |
| HP5 | Specific target organ toxicity | STOT SE 1: Sum of H370 > 1%<br>STOT SE 2: Sum of H371 > 10%<br>STOT SE 3: Sum of H335 > 20%<br>STOT SE 1: Sum of H372 > 1%<br>STOT SE 2: Sum of H373 > 10%<br>Asp tox 1: Sum of H304 > 10% | | NH | NH | NH | NH | NH | NH |
| HP6 | Acute toxicity | Contains individual substances classified as H300, H301, H310, H311, H330, H331 above 0.1% or H302, H312 and H332 above 1% cut-off values? | If False, it is not included in the sum of the concentrations for that hazard category code. | FALSE | FALSE | FALSE | FALSE | FALSE | FALSE |
| | | If the above is true, the waste is hazardous if: sum of H300 ≥ 0.1% (Acute Tox. 1 oral) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H300 ≥ 0.25% (Acute Tox. 2 oral) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H301 ≥ 5% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H302 ≥ 25% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H310 ≥ 0.25 (Acute Tox. 1 Derm) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H310 ≥ 2.5% (Acute Tox. 2 Derm) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H311 ≥ 15% | | N/A | N/A | N/A | N/A | N/A | N/A |
| | | or sum of H312 ≥ 55% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H330 ≥ 0.1% (Acute Tox 1. Inhal) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H330 ≥ 0.5% (Acute Tox 2. Inhal) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H331 ≥ 3.5% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H332 ≥ 22.5% | | NH | NH | NH | NH | NH | NH |
| HP7 | Carcinogenic | Carc. 1: Sum of H350 > 0.1%<br>Carc. 2: Sum of H351 > 1% | | NH | NH | NH | NH | NH | NH |
| HP8 | Corrosive | Sum of H314 >5% | Concentrations between 1 and 5% would be considered as HP4 | NH | NH | NH | NH | NH | NH |
| HP9 | Infectious | Containing microorganisms or toxins | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP10 | Toxic for reproduction | Repr. 1: Sum of H360 > 0.3%<br>Repr. 2: Sum of H361 > 3% | | NH | NH | NH | NH | NH | NH |
| HP11 | Mutagenic | Muta 1: Sum of H340 > 0.1%<br>Muta 2: Sum of H341 > 1% | | NH | NH | NH | NH | NH | NH |
| HP12 | Acute toxic gas | Presence or absence of EUH029, EUH031, EUH032 | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP13 | Sensitising | Sum of H317, H334 > 10% | | NH | NH | NH | NH | NH | NH |
| HP14 | Ecotoxic | Sum of H400 and H410 > 25% | Immediate or delayed risks for the environment | NH | NH | NH | NH | NH | NH |
| HP15 | Hazardous property not displayed in original waste | Presence or absence of H205, EUH001, EUH019, EUH044 | | N/A | N/A | N/A | N/A | N/A | N/A |

| Replicate F1S1 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 2.4 | Arsenic acid and its salts | 142 | 0.0004544 |
| Cadmium | 112 | 0.2 | Cadmium oxide | 128 | 2.28571E-05 |
| Chromium | 52 | 10 | Chromium III chromate | 452 | 0.008692308 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 7 | Nickel Monoxide | 75 | 0.000889831 |
| Lead | 207 | 2.8 | Tetraethyl lead (Lead alkyls) | 323 | 0.000436908 |
| Copper | 65 | 5 | Copper (I) oxide | 143 | 0.0011 |
| Zinc | 64 | 1 | Zinc oxide | 81 | 0.000126563 |
| Benzo(a)pyrene | 252 | 10 | Benzo(a)pyrene | 252 | 0.001 |
| Benzo(k)fluoranthene | 252 | 0.016 | Benzo(k)fluoranthene | 252 | 0.0000016 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.53 | Total organic carbon | 1 | 0.000053 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate F1S2 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 2.3 | Arsenic acid and its salts | 142 | 0.000435467 |
| Cadmium | 112 | 0.2 | Cadmium oxide | 128 | 2.28571E-05 |
| Chromium | 52 | 10 | Chromium III chromate | 452 | 0.008692308 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 7 | Nickel Monoxide | 75 | 0.000889831 |
| Lead | 207 | 3.5 | Tetraethyl lead (Lead alkyls) | 323 | 0.000546135 |
| Copper | 65 | 5 | Copper (I) oxide | 143 | 0.0011 |
| Zinc | 64 | 10 | Zinc oxide | 81 | 0.001265625 |
| Benzo(a)pyrene | 252 | 0.034 | Benzo(a)pyrene | 252 | 0.0000034 |
| Benzo(k)fluoranthene | 252 | 0.016 | Benzo(k)fluoranthene | 252 | 0.0000016 |
| Benzo (g,h,i) perylene | 276 | 0.012 | Benzo (g,h,i) perylene | 276 | 0.0000012 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.014 | Indeno (1,2,3-cd) pyrene | 290 | 0.0000014 |
| Fluoranthene | 202 | 0.055 | Fluoranthene | 202 | 0.0000055 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.2 | Total organic carbon | 1 | 0.00002 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate F1M1 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | onc (mg/kg | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 4.6 | Arsenic acid and its salts | 142 | 0.000870933 |
| Cadmium | 112 | 0.2 | Cadmium oxide | 128 | 2.28571E-05 |
| Chromium | 52 | 13 | Chromium III chromate | 452 | 0.0113 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 13 | Nickel Monoxide | 75 | 0.001652542 |
| Lead | 207 | 1 | Tetraethyl lead (Lead alkyls) | 323 | 0.000156039 |
| Copper | 65 | 6.8 | Copper (I) oxide | 143 | 0.001496 |
| Zinc | 64 | 17 | Zinc oxide | 81 | 0.002151563 |
| Benzo(a)p | 252 | 0.01 | Benzo(a)pyrene | 252 | 0.000001 |
| Benzo(k)fl | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1, | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthe | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total orga | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate F1M2 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 4.5 | Arsenic acid and its salts | 142 | 0.000852 |
| Cadmium | 112 | 0.22 | Cadmium oxide | 128 | 2.51429E-05 |
| Chromium | 52 | 13 | Chromium III chromate | 452 | 0.0113 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 14 | Nickel Monoxide | 75 | 0.001779661 |
| Lead | 207 | 1 | Tetraethyl lead (Lead alkyls) | 323 | 0.000156039 |
| Copper | 65 | 6.5 | Copper (I) oxide | 143 | 0.00143 |
| Zinc | 64 | 17 | Zinc oxide | 81 | 0.002151563 |
| Benzo(a)pyrene | 252 | 0.01 | Benzo(a)pyrene | 252 | 0.000001 |
| Benzo(k)fluoranthene | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate F1D1 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 3.3 | Arsenic acid and its salts | 142 | 0.0006248 |
| Cadmium | 112 | 0.2 | Cadmium oxide | 128 | 2.28571E-05 |
| Chromium | 52 | 10 | Chromium III chromate | 452 | 0.008692308 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 10 | Nickel Monoxide | 75 | 0.001271186 |
| Lead | 207 | 1 | Tetraethyl lead (Lead alkyls) | 323 | 0.000156039 |
| Copper | 65 | 5.6 | Copper (I) oxide | 143 | 0.001232 |
| Zinc | 64 | 13 | Zinc oxide | 81 | 0.001645313 |
| Benzo(a)pyrene | 252 | 0.01 | Benzo(a)pyrene | 252 | 0.000001 |
| Benzo(k)fluoranthene | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate F1D2 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | onc (mg/kg | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 3.1 | Arsenic acid and its salts | 142 | 0.000586933 |
| Cadmium | 112 | 0.2 | Cadmium oxide | 128 | 2.28571E-05 |
| Chromium | 52 | 10 | Chromium III chromate | 452 | 0.008692308 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 10 | Nickel Monoxide | 75 | 0.001271186 |
| Lead | 207 | 1 | Tetraethyl lead (Lead alkyls) | 323 | 0.000156039 |
| Copper | 65 | 5.3 | Copper (I) oxide | 143 | 0.001166 |
| Zinc | 64 | 13 | Zinc oxide | 81 | 0.001645313 |
| Benzo(a)p | 252 | 0.01 | Benzo(a)pyrene | 252 | 0.000001 |
| Benzo(k)fl | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1, | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthe | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total orga | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Metal compound | H-statement | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H271 | H300 | H301 | H302 | H310 | H312 | H314 | H315 | H317 | H318 | H319 | H330 | H331 | H332 | H340 | H341 | H350 | H351 | H360 | H361f-d | H372 | H373 | H400 | H401 | H410 | H413 |
| Arsenic acid and its salts | | | Y | | | | | | | | | | Y | | | | Y | | | | | | Y | | Y | |
| Cadmium oxide | | | | | | | | | | | | Y | | | | Y | Y | | | Y | Y | | Y | | Y | |
| Chromium III chromate | Y | | | | | | Y | | Y | | | | | | | | Y | | | | | | Y | | Y | |
| Dimethyl mercury | | Y | | | Y | | | | | | | Y | | | | | | | | | | Y | Y | | Y | |
| Nickel Monoxide | | | | | | | | | Y | | | | | | | | Y | | | | Y | | | | | Y |
| Tetraethyl lead (Lead alkyls) | | Y | | | Y | | | | | | | Y | | | | | | | Y | | | Y | Y | | Y | |
| Copper (I) oxide | | | | Y | | | | | | Y | | | | Y | | | | | | | | | Y | | Y | |
| Zinc oxide | | | | | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Benzo(a)pyrene | | | | | | | | | Y | | | | | | Y | | Y | | Y | | | | Y | | Y | |
| Benzo(k)fluoranthene | | | | | | | | | | | | | | | | | Y | | | | | | Y | | Y | |
| Benzo (g,h,i) perylene | | | | | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Indeno (1,2,3-cd) pyrene | | | | | | | | | | | | | | | | | | Y | | | | | | | | |
| Fluoranthene | | | | Y | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Total PCB content | | | | | | | | | | | | | | | | | | | | | | Y | Y | | Y | |
| Total organic carbon | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tributyltin oxide | | | Y | | | Y | | Y | | | Y | | | | | | | | Y | | Y | | Y | | Y | |
| **TOTAL F1S1 (% conc)** | **0.009** | **0.000** | **0.001** | **0.001** | **0.000** | **0.001** | **0.009** | **0.001** | **0.011** | **0.001** | **0.001** | **0.000** | **0.000** | **0.001** | **0.001** | **0.000** | **0.011** | **0.000** | **0.002** | **0.000** | **0.001** | **0.000** | **0.012** | **0.000** | **0.012** | **0.001** |
| **TOTAL F1S2 (% conc)** | **0.009** | **0.001** | **0.001** | **0.001** | **0.001** | **0.001** | **0.009** | **0.001** | **0.010** | **0.001** | **0.001** | **0.001** | **0.000** | **0.001** | **0.000** | **0.000** | **0.010** | **0.000** | **0.001** | **0.000** | **0.001** | **0.001** | **0.013** | **0.000** | **0.013** | **0.001** |
| **TOTAL F1M1 (% conc)** | **0.011** | **0.000** | **0.001** | **0.001** | **0.000** | **0.001** | **0.011** | **0.001** | **0.013** | **0.001** | **0.001** | **0.000** | **0.001** | **0.001** | **0.000** | **0.000** | **0.014** | **0.000** | **0.001** | **0.000** | **0.002** | **0.000** | **0.017** | **0.000** | **0.017** | **0.002** |
| **TOTAL F1M2 (% conc)** | **0.011** | **0.000** | **0.001** | **0.001** | **0.000** | **0.001** | **0.011** | **0.001** | **0.013** | **0.001** | **0.001** | **0.000** | **0.001** | **0.001** | **0.000** | **0.000** | **0.014** | **0.000** | **0.001** | **0.000** | **0.002** | **0.000** | **0.016** | **0.000** | **0.016** | **0.002** |
| **TOTAL F1D1 (% conc)** | **0.009** | **0.000** | **0.001** | **0.001** | **0.000** | **0.001** | **0.009** | **0.001** | **0.010** | **0.001** | **0.001** | **0.000** | **0.001** | **0.001** | **0.000** | **0.000** | **0.011** | **0.000** | **0.001** | **0.000** | **0.002** | **0.000** | **0.013** | **0.000** | **0.013** | **0.001** |
| **TOTAL F1D2 (% conc)** | **0.009** | **0.000** | **0.001** | **0.001** | **0.000** | **0.001** | **0.009** | **0.001** | **0.010** | **0.001** | **0.001** | **0.000** | **0.001** | **0.001** | **0.000** | **0.000** | **0.011** | **0.000** | **0.001** | **0.000** | **0.002** | **0.000** | **0.013** | **0.000** | **0.013** | **0.001** |

| Code | Description | Classification SL 549.63 | Notes | Classification | | Classification | | Classification | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | F1S1 | F1S2 | F1M1 | F1M2 | F1D1 | F1D2 |
| HP1 | Explosive | Presence or absence of H200, H201, H202, H203, H204, H240, H241 | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP2 | Oxidising | Presence or absence of H270, H271, H272 and the source is not marine | Not marine | NH | NH | NH | NH | NH | NH |
| HP3 | Flammable | Presence or absence of H220, H221, H222, H223, H224, H225, H226, H228, H242, H250, H251, H250, H260, H261 | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP4 | Irritant | Sum of H314 between 1% and 5%<br>Sum of H318 > 1%<br>Sum of H315, H319 > 10% | If sum of H314 > 5%, then HP8 will apply so HP4 would not apply | NH | NH | NH | NH | NH | NH |
| HP5 | Specific target organ toxicity | STOT SE 1: Sum of H370 > 1%<br>STOT SE 2: Sum of H371 > 10%<br>STOT SE 3: Sum of H335 > 20%<br>STOT SE 1: Sum of H372 > 1%<br>STOT SE 2: Sum of H373 > 10%<br>Asp tox 1: Sum of H304 > 10% | | NH | NH | NH | NH | NH | NH |
| HP6 | Acute toxicity | Contains individual substances classified as H300, H301, H310, H311, H330, H331 above 0.1% or H302, H312 and H332 above 1% cut-off values? | If False, it is not included in the sum of the concentrations for that hazard category code. | FALSE | FALSE | FALSE | FALSE | FALSE | FALSE |
| | | If the above is true, the waste is hazardous if: sum of H300 ≥ 0.1% (Acute Tox. 1 oral) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H300 ≥ 0.25% (Acute Tox. 2 oral) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H301 ≥ 5% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H302 ≥ 25% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H310 ≥ 0.25 (Acute Tox. 1 Derm) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H310 ≥ 2.5% (Acute Tox. 2 Derm) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H311 ≥ 15% | | N/A | N/A | N/A | N/A | N/A | N/A |
| | | or sum of H312 ≥ 55% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H330 ≥ 0.1% (Acute Tox 1. Inhal) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H330 ≥ 0.5% (Acute Tox 2. Inhal) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H331 ≥ 3.5% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H332 ≥ 22.5% | | NH | NH | NH | NH | NH | NH |
| HP7 | Carcinogenic | Carc. 1: Sum of H350 > 0.1%<br>Carc. 2: Sum of H351 > 1% | | NH | NH | NH | NH | NH | NH |
| HP8 | Corrosive | Sum of H314 >5% | Concentrations between 1 and 5% would be considered as HP4 | NH | NH | NH | NH | NH | NH |
| HP9 | Infectious | Containing microorganisms or toxins | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP10 | Toxic for reproduction | Repr. 1: Sum of H360 > 0.3%<br>Repr. 2: Sum of H361 > 3% | | NH | NH | NH | NH | NH | NH |
| HP11 | Mutagenic | Muta 1: Sum of H340 > 0.1%<br>Muta 2: Sum of H341 > 1% | | NH | NH | NH | NH | NH | NH |
| HP12 | Acute toxic gas | Presence or absence of EUH029, EUH031, EUH032 | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP13 | Sensitising | Sum of H317, H334 > 10% | | NH | NH | NH | NH | NH | NH |
| HP14 | Ecotoxic | Sum of H400 and H410 > 25% | Immediate or delayed risks for the environment | NH | NH | NH | NH | NH | NH |
| HP15 | Hazardous property not displayed in original waste | Presence or absence of H205, EUH001, EUH019, EUH044 | | N/A | N/A | N/A | N/A | N/A | N/A |

| Replicate J1S1 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 2.7 | Arsenic acid and its salts | 142 | 0.0005112 |
| Cadmium | 112 | 0.3 | Cadmium oxide | 128 | 3.42857E-05 |
| Chromium | 52 | 8 | Chromium III chromate | 452 | 0.006953846 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 8 | Nickel Monoxide | 75 | 0.001016949 |
| Lead | 207 | 2.1 | Tetraethyl lead (Lead alkyls) | 323 | 0.000327681 |
| Copper | 65 | 5 | Copper (I) oxide | 143 | 0.0011 |
| Zinc | 64 | 11 | Zinc oxide | 81 | 0.001392188 |
| Benzo(a)pyrene | 252 | 0.01 | Benzo(a)pyrene | 252 | 0.000001 |
| Benzo(k)fluoranthene | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.11 | Total organic carbon | 1 | 0.000011 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate J1S2 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 3.2 | Arsenic acid and its salts | 142 | 0.000605867 |
| Cadmium | 112 | 0.34 | Cadmium oxide | 128 | 3.88571E-05 |
| Chromium | 52 | 10 | Chromium III chromate | 452 | 0.008692308 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 9 | Nickel Monoxide | 75 | 0.001144068 |
| Lead | 207 | 2.7 | Tetraethyl lead (Lead alkyls) | 323 | 0.000421304 |
| Copper | 65 | 5 | Copper (I) oxide | 143 | 0.0011 |
| Zinc | 64 | 14 | Zinc oxide | 81 | 0.001771875 |
| Benzo(a)pyrene | 252 | 0.01 | Benzo(a)pyrene | 252 | 0.000001 |
| Benzo(k)fluoranthene | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate J1M1 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | onc (mg/kg | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 3.4 | Arsenic acid and its salts | 142 | 0.000643733 |
| Cadmium | 112 | 0.25 | Cadmium oxide | 128 | 2.85714E-05 |
| Chromium | 52 | 8 | Chromium III chromate | 452 | 0.006953846 |
| Mercury | 201 | 0.01 | Dimethyl mercury | 231 | 1.14925E-06 |
| Nickel | 59 | 10 | Nickel Monoxide | 75 | 0.001271186 |
| Lead | 207 | 1 | Tetraethyl lead (Lead alkyls) | 323 | 0.000156039 |
| Copper | 65 | 5 | Copper (I) oxide | 143 | 0.0011 |
| Zinc | 64 | 11 | Zinc oxide | 81 | 0.001392188 |
| Benzo(a)p | 252 | 0.01 | Benzo(a)pyrene | 252 | 0.000001 |
| Benzo(k)fl | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1, | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthe | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total orga | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate J1M2 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 7.4 | Arsenic acid and its salts | 142 | 0.001401067 |
| Cadmium | 112 | 0.57 | Cadmium oxide | 128 | 6.51429E-05 |
| Chromium | 52 | 17 | Chromium III chromate | 452 | 0.014776923 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 18 | Nickel Monoxide | 75 | 0.002288136 |
| Lead | 207 | 1 | Tetraethyl lead (Lead alkyls) | 323 | 0.000156039 |
| Copper | 65 | 7.1 | Copper (I) oxide | 143 | 0.001562 |
| Zinc | 64 | 23 | Zinc oxide | 81 | 0.002910938 |
| Benzo(a)pyrene | 252 | 0.01 | Benzo(a)pyrene | 252 | 0.000001 |
| Benzo(k)fluoranthene | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate J1D1 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | Conc (mg/kg) | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 6.5 | Arsenic acid and its salts | 142 | 0.001230667 |
| Cadmium | 112 | 0.37 | Cadmium oxide | 128 | 4.22857E-05 |
| Chromium | 52 | 18 | Chromium III chromate | 452 | 0.015646154 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 21 | Nickel Monoxide | 75 | 0.002669492 |
| Lead | 207 | 1 | Tetraethyl lead (Lead alkyls) | 323 | 0.000156039 |
| Copper | 65 | 7.4 | Copper (I) oxide | 143 | 0.001628 |
| Zinc | 64 | 26 | Zinc oxide | 81 | 0.003290625 |
| Benzo(a)pyrene | 252 | 0.01 | Benzo(a)pyrene | 252 | 0.000001 |
| Benzo(k)fluoranthene | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h,i) perylene | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1,2,3-cd) pyrene | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthene | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB content | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total organic carbon | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Replicate J1D2 | | | | | |
|---|---|---|---|---|---|
| Metal | | | Compound | | |
| Chemical | RAM | onc (mg/kg | Compound chemical | RMM | % Conc |
| Arsenic | 75 | 5.8 | Arsenic acid and its salts | 142 | 0.001098133 |
| Cadmium | 112 | 0.34 | Cadmium oxide | 128 | 3.88571E-05 |
| Chromium | 52 | 16 | Chromium III chromate | 452 | 0.013907692 |
| Mercury | 201 | 0.1 | Dimethyl mercury | 231 | 1.14925E-05 |
| Nickel | 59 | 20 | Nickel Monoxide | 75 | 0.002542373 |
| Lead | 207 | 1 | Tetraethyl lead (Lead alkyls) | 323 | 0.000156039 |
| Copper | 65 | 6.5 | Copper (I) oxide | 143 | 0.00143 |
| Zinc | 64 | 23 | Zinc oxide | 81 | 0.002910938 |
| Benzo(a)p | 252 | 0.01 | Benzo(a)pyrene | 252 | 0.000001 |
| Benzo(k)fl | 252 | 0.01 | Benzo(k)fluoranthene | 252 | 0.000001 |
| Benzo (g,h | 276 | 0.01 | Benzo (g,h,i) perylene | 276 | 0.000001 |
| Indeno (1, | 290 | 0.01 | Indeno (1,2,3-cd) pyrene | 290 | 0.000001 |
| Fluoranthe | 202 | 0.01 | Fluoranthene | 202 | 0.000001 |
| Total PCB | 1 | 0.001 | Total PCB content | 1 | 0.0000001 |
| Total orga | 1 | 0.01 | Total organic carbon | 1 | 0.000001 |
| Tin | 119 | 1 | Tributyltin oxide | 596 | 0.00050084 |

| Metal compound | H-statement | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H271 | H300 | H301 | H302 | H310 | H312 | H314 | H315 | H317 | H318 | H319 | H330 | H331 | H332 | H340 | H341 | H350 | H351 | H360 | H361f-d | H372 | H373 | H400 | H401 | H410 | H413 |
| Arsenic acid and its salts | | | Y | | | | | | | | | | Y | | | | Y | | | | | | Y | | Y | |
| Cadmium oxide | | | | | | | | | | | | Y | | | | Y | Y | | | Y | Y | | Y | | Y | |
| Chromium III chromate | Y | | | | | | Y | | Y | | | | | | | | Y | | | | | | Y | | Y | |
| Dimethyl mercury | | Y | | | Y | | | | | | | Y | | | | | | | | | | Y | Y | | Y | |
| Nickel Monoxide | | | | | | | | | Y | | | | | | | | Y | | | | Y | | | | | Y |
| Tetraethyl lead (Lead alkyls) | | Y | | | Y | | | | | | | Y | | | | | | | Y | | | Y | Y | | Y | |
| Copper (I) oxide | | | | Y | | | | | | Y | | | | Y | | | | | | | | | Y | | Y | |
| Zinc oxide | | | | | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Benzo(a)pyrene | | | | | | | | | Y | | | | | | Y | | Y | | Y | | | | Y | | Y | |
| Benzo(k)fluoranthene | | | | | | | | | | | | | | | | | Y | | | | | | Y | | Y | |
| Benzo (g,h,i) perylene | | | | | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Indeno (1,2,3-cd) pyrene | | | | | | | | | | | | | | | | | | Y | | | | | | | | |
| Fluoranthene | | | | Y | | | | | | | | | | | | | | | | | | | Y | | Y | |
| Total PCB content | | | | | | | | | | | | | | | | | | | | | | Y | Y | | Y | |
| Total organic carbon | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tributyltin oxide | | | Y | | | Y | | Y | | | Y | | | | | | | | Y | | Y | | Y | | Y | |
| **TOTAL J1S1 (% conc)** | **0.007** | **0.000** | **0.001** | **0.001** | **0.000** | **0.001** | **0.007** | **0.001** | **0.008** | **0.001** | **0.001** | **0.000** | **0.001** | **0.001** | **0.000** | **0.000** | **0.009** | **0.000** | **0.001** | **0.000** | **0.002** | **0.000** | **0.011** | **0.000** | **0.011** | **0.001** |
| **TOTAL J1S2 (% conc)** | **0.009** | **0.000** | **0.001** | **0.001** | **0.000** | **0.001** | **0.009** | **0.001** | **0.010** | **0.001** | **0.001** | **0.000** | **0.001** | **0.001** | **0.000** | **0.000** | **0.010** | **0.000** | **0.001** | **0.000** | **0.002** | **0.000** | **0.013** | **0.000** | **0.013** | **0.001** |
| **TOTAL J1M1 (% conc)** | **0.007** | **0.000** | **0.001** | **0.001** | **0.000** | **0.001** | **0.007** | **0.001** | **0.008** | **0.001** | **0.001** | **0.000** | **0.001** | **0.001** | **0.000** | **0.000** | **0.009** | **0.000** | **0.001** | **0.000** | **0.002** | **0.000** | **0.011** | **0.000** | **0.011** | **0.001** |
| **TOTAL J1M2 (% conc)** | **0.015** | **0.000** | **0.002** | **0.002** | **0.000** | **0.001** | **0.015** | **0.001** | **0.017** | **0.002** | **0.001** | **0.000** | **0.001** | **0.002** | **0.000** | **0.000** | **0.019** | **0.000** | **0.001** | **0.000** | **0.003** | **0.000** | **0.021** | **0.000** | **0.021** | **0.002** |
| **TOTAL J1D1 (% conc)** | **0.016** | **0.000** | **0.002** | **0.002** | **0.000** | **0.001** | **0.016** | **0.001** | **0.018** | **0.002** | **0.001** | **0.000** | **0.001** | **0.002** | **0.000** | **0.000** | **0.020** | **0.000** | **0.001** | **0.000** | **0.003** | **0.000** | **0.023** | **0.000** | **0.023** | **0.003** |
| **TOTAL J1D2 (% conc)** | **0.014** | **0.000** | **0.002** | **0.001** | **0.000** | **0.001** | **0.014** | **0.001** | **0.016** | **0.001** | **0.001** | **0.000** | **0.001** | **0.001** | **0.000** | **0.000** | **0.018** | **0.000** | **0.001** | **0.000** | **0.003** | **0.000** | **0.020** | **0.000** | **0.020** | **0.003** |

| Code | Description | Classification SL 549.63 | Notes | Classification | | Classification | | Classification | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | J1S1 | J1S2 | J1M1 | J1M2 | J1D1 | J1D2 |
| HP1 | Explosive | Presence or absence of H200, H201, H202, H203, H204, H240, H241 | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP2 | Oxidising | Presence or absence of H270, H271, H272 and the source is not marine | Not marine | NH | NH | NH | NH | NH | NH |
| HP3 | Flammable | Presence or absence of H220, H221, H222, H223, H224, H225, H226, H228, H242, H250, H251, H250, H260, H261 | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP4 | Irritant | Sum of H314 between 1% and 5%<br>Sum of H318 > 1%<br>Sum of H315, H319 > 10% | If sum of H314 > 5%, then HP8 will apply so HP4 would not apply | NH | NH | NH | NH | NH | NH |
| HP5 | Specific target organ toxicity | STOT SE 1: Sum of H370 > 1%<br>STOT SE 2: Sum of H371 > 10%<br>STOT SE 3: Sum of H335 > 20%<br>STOT SE 1: Sum of H372 > 1%<br>STOT SE 2: Sum of H373 > 10%<br>Asp tox 1: Sum of H304 > 10% | | NH | NH | NH | NH | NH | NH |
| HP6 | Acute toxicity | Contains individual substances classified as H300, H301, H310, H311, H330, H331 above 0.1% or H302, H312 and H332 above 1% cut-off values? | If False, it is not included in the sum of the concentrations for that hazard category code. | FALSE | FALSE | FALSE | FALSE | FALSE | FALSE |
| | | If the above is true, the waste is hazardous if: sum of H300 ≥ 0.1% (Acute Tox. 1 oral) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H300 ≥ 0.25% (Acute Tox. 2 oral) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H301 ≥ 5% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H302 ≥ 25% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H310 ≥ 0.25 (Acute Tox. 1 Derm) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H310 ≥ 2.5% (Acute Tox. 2 Derm) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H311 ≥ 15% | | N/A | N/A | N/A | N/A | N/A | N/A |
| | | or sum of H312 ≥ 55% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H330 ≥ 0.1% (Acute Tox 1. Inhal) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H330 ≥ 0.5% (Acute Tox 2. Inhal) | | NH | NH | NH | NH | NH | NH |
| | | or sum of H331 ≥ 3.5% | | NH | NH | NH | NH | NH | NH |
| | | or sum of H332 ≥ 22.5% | | NH | NH | NH | NH | NH | NH |
| HP7 | Carcinogenic | Carc. 1: Sum of H350 > 0.1%<br>Carc. 2: Sum of H351 > 1% | | NH | NH | NH | NH | NH | NH |
| HP8 | Corrosive | Sum of H314 >5% | Concentrations between 1 and 5% would be considered as HP4 | NH | NH | NH | NH | NH | NH |
| HP9 | Infectious | Containing microorganisms or toxins | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP10 | Toxic for reproduction | Repr. 1: Sum of H360 > 0.3%<br>Repr. 2: Sum of H361 > 3% | | NH | NH | NH | NH | NH | NH |
| HP11 | Mutagenic | Muta 1: Sum of H340 > 0.1%<br>Muta 2: Sum of H341 > 1% | | NH | NH | NH | NH | NH | NH |
| HP12 | Acute toxic gas | Presence or absence of EUH029, EUH031, EUH032 | | N/A | N/A | N/A | N/A | N/A | N/A |
| HP13 | Sensitising | Sum of H317, H334 > 10% | | NH | NH | NH | NH | NH | NH |
| HP14 | Ecotoxic | Sum of H400 and H410 > 25% | Immediate or delayed risks for the environment | NH | NH | NH | NH | NH | NH |
| HP15 | Hazardous property not displayed in original waste | Presence or absence of H205, EUH001, EUH019, EUH044 | | N/A | N/A | N/A | N/A | N/A | N/A |