



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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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 Marsascale. 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 21,373m². 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 10,000-50,000m² 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.

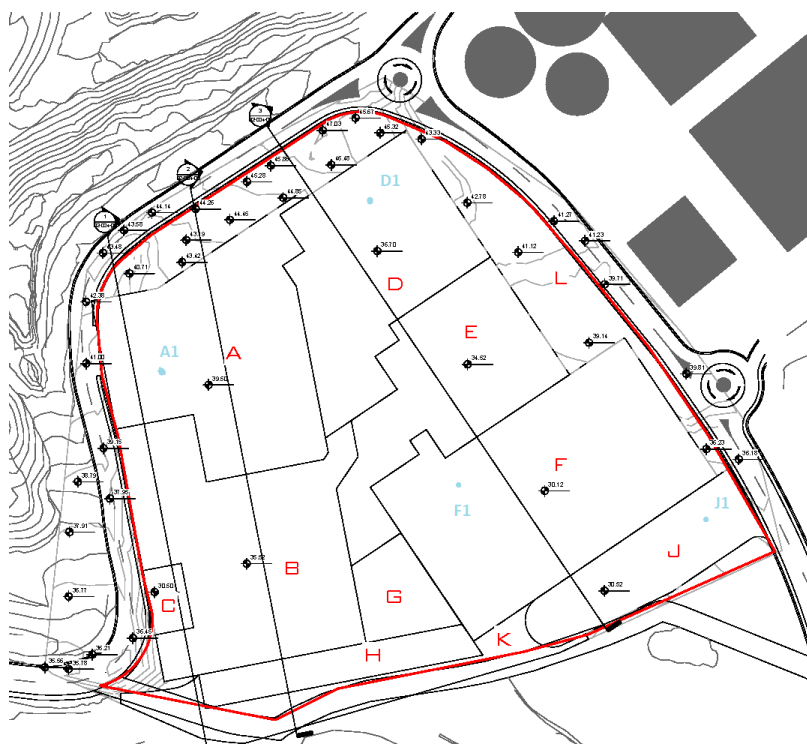


Figure 2: Sampling locations (Marked in Blue)

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) 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) 2.5m (D1M1/D1M2) 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) 2.5m (F1M1/F1M2) 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) 1.5m (J1M1/J1M2) 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 limits stipulated in the Decreto 152 of 2006 for Commercial & Industrial Limits. Consequently, the material excavated from the MRF site is suitable for backfilling on site. The Residential Limits of the Decreto were also evaluated to assess the possibility of transferring the material offsite in an authorised waste acceptance quarry. Most sample results obtained are above certain Residential Limits of the Decreto and therefore the EPC contractor should not dispose of the excavated material indiscriminately in an authorised waste acceptance quarry. Material excavated from A1, D1 and F1 should be kept apart and reused as backfill on site, due to the exceedances that have been noted. Only material excavated from J1 may be considered for disposal in an authorised quarry.

Table 5: Results from Ground contamination analysis

ANALYTE	U.O.M	INDUSTRIAL LIMIT (Decreto 152 of 2006)	RESIDENTIAL LIMIT (Decreto 152 of 2006)	A1S1	A1S2	A1M1	A1M2	D1S1	D1S2	D1M1	D1M2	D1D1	D1D2	F1S1
Arsenic	Mg/kg	50	20	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	2	<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	150	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	1	<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	120	10	11	23	22	11	15	9	10	8	8	7
Lead	Mg/kg	1000	100	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	120	10	33	17	17	30.0	23.0	7.0	11.0	6.0	7.0	<5.0
Tin	Mg/kg	N/A	N/A	<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	150	27	28	60	59	70	52	22	32	14	17	10
Cyanides	Mg/kg	100	1	<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	0.5	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	0.1	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	0.5	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	0.5	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	0.1	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	5	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	0.1	<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	0.1	<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	0.1	<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	0.1	<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	0.1	<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	0.1	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	5	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	N/A	N/A	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	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	10	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	0.1	<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	0.5	<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	0.5	<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	0.5	<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	<0.00001
PCB28	Mg/kg	5	0.06	<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	0.06	<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	0.06	<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	0.06	<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	0.06	<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	0.06	<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	0.06	<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	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	750	50	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	INDUSTRIAL LIMIT (DECRETO 152 OF 2006)	RESIDENTIAL LIMIT (DECRETO 152 OF 2006)	F1S2	F1M1	F1M2	F1D1	F1D2	J1S1	J1S2	J1M1	J1M2	J1D1	J1D2
Arsenic	Mg/kg	50	20	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	2	<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	150	10	13	13	10	10	8	10	8	17	18	16
Mercury	Mg/kg	5	1	<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	120	7	13	14	10	10	8	9	10	18	21	20
Lead	Mg/kg	1000	100	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	120	<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	N/A	N/A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc	Mg/kg	1500	150	10	17	17	13	13	11	14	11	23	26	23
Cyanides	Mg/kg	100	1	<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	0.5	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	0.1	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	0.5	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	0.5	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	0.1	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	5	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	0.1	<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	0.1	<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	0.1	<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	0.1	<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	0.1	<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	0.1	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	5	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	N/A	N/A	<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	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	10	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	0.1	<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	0.5	<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	0.5	<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	0.5	<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	<0.00001
PCB28	Mg/kg	5	0.06	<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	0.06	<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	0.06	<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	0.06	<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	0.06	<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	0.06	<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	0.06	<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	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	750	50	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: 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; 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: 1. The total concentration of compounds with H350 does not exceed the threshold of 0.1%; and 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.
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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°: **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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	0,11	mg/kg	0,03			
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	808	mg/kg	140			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	7,2	mg/kg	1,8			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	396	mg/kg	69			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	42,0	mg/kg	6,8			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	6900	mg/kg	550			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN ISO 14402:2004	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	11,6	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,18					
<i>Mass of the laboratory sample (Kg)</i>							

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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		Pestle and mortar					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		73,5					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,101					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		11		2			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		29/12/2023					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,889					
<i>Leaching agent volume (l)</i>							
pH (Unità)		11,6		0,1			
<i>pH (Unit)</i>							
Conducibilità (μS/cm)	-	1155		250			
<i>Conductivity (μS/cm)</i>							
Temperatura (°C)		18,4					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158080-001

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

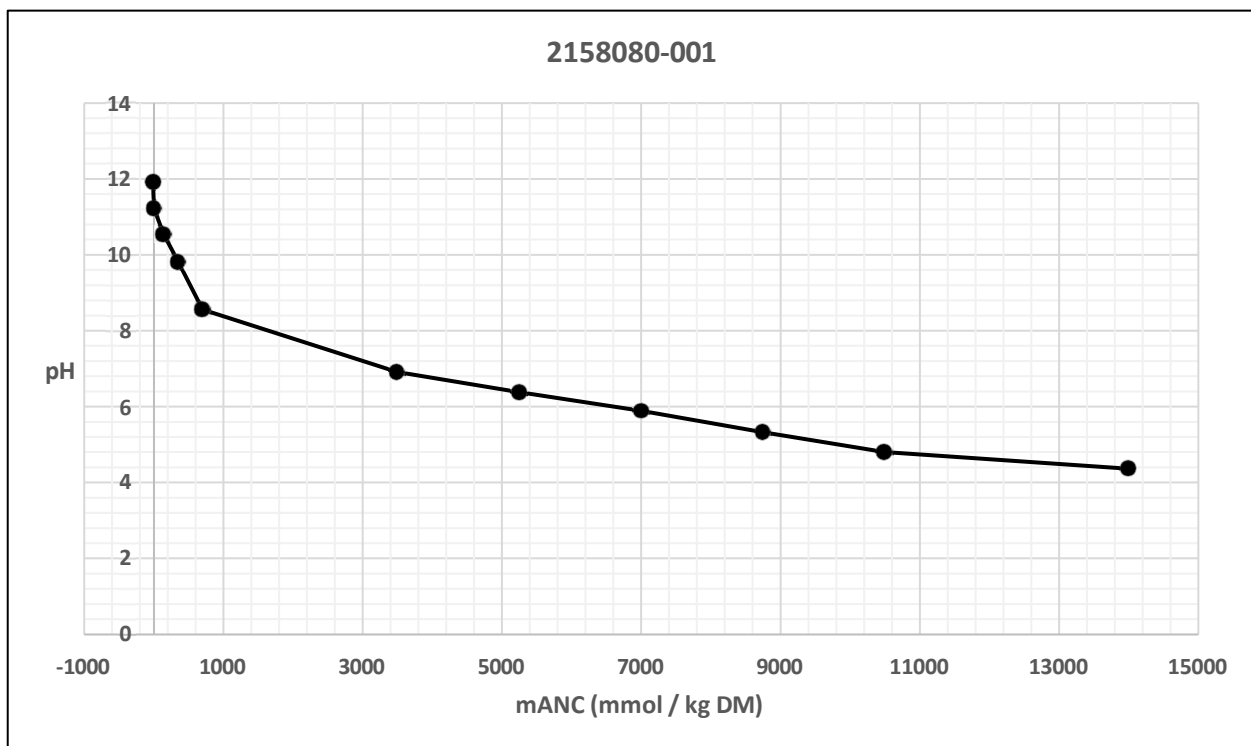
Test Finish Date: 11/01/2024

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 _i (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		10,51	9,74	8,51	6,84	6,32	5,86	5,31	4,75	4,34

ΔpH (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
ΔpH (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



Laboratory Technical Manager

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n°294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	0,17	mg/kg	0,03			
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	813	mg/kg	140			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	8,7	mg/kg	2,1			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	543	mg/kg	94			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	28,6	mg/kg	4,6			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	4900	mg/kg	390			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN ISO 14402:2004	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	11,2	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,19					
<i>Mass of the laboratory sample (Kg)</i>							

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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		Pestle and mortar					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		75,2					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,1					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		10		2			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		29/12/2023					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,89					
<i>Leaching agent volume (l)</i>							
pH (Unità)		11,2		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)	-	833		180			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,4					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158080-002

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

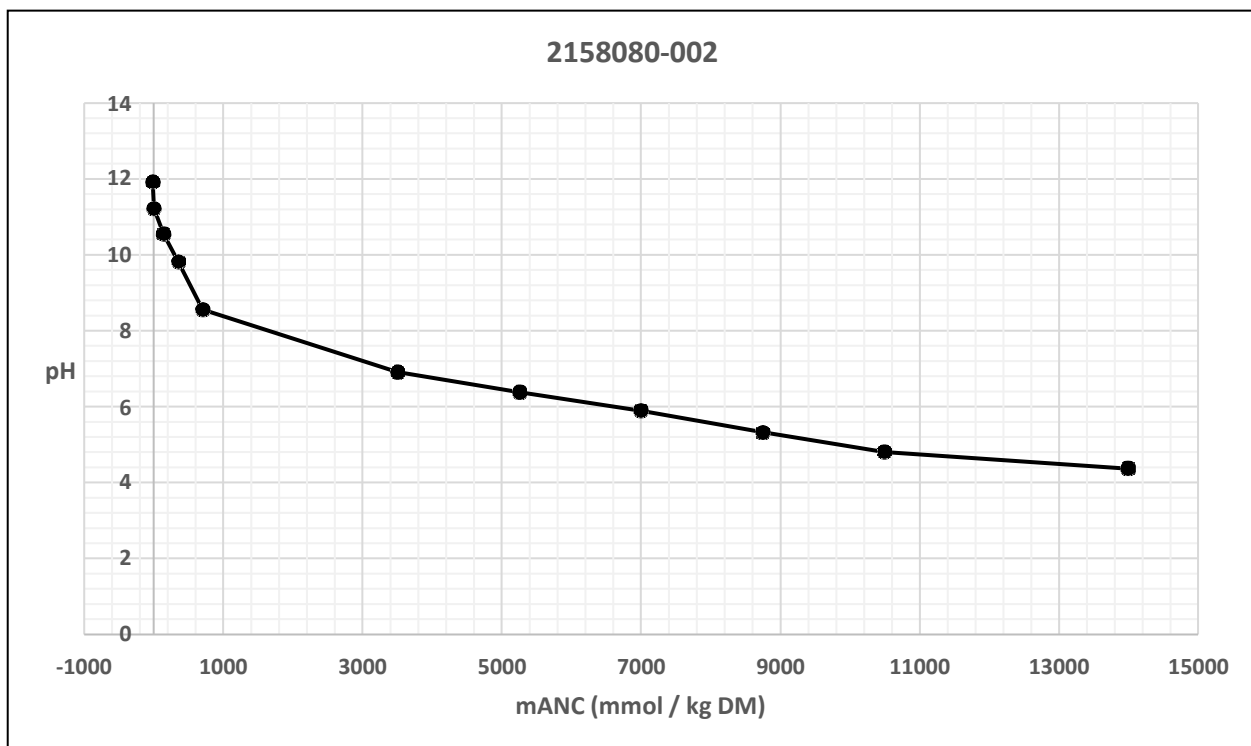
Test Finish Date: 11/01/2024

Test	1	LT	2	3	4	5	6	7	8	9	10
HNO ₃ Concentration (mol / L)	/	/	5	5	5	5	5	5	5	5	5
HNO ₃ Volume (mL)	/	/	2	5	10	50	75	100	125	150	200
mol HNO ₃ (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

ΔpH (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
ΔpH (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



Laboratory Technical Manager

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n°294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	0,029	mg/kg	0,006			
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	326	mg/kg	57			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	12	mg/kg	3			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	176	mg/kg	31			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	25,8	mg/kg	4,2			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	1500	mg/kg	120			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN ISO 14402:2004	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	8,8	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,09					
<i>Mass of the laboratory sample (Kg)</i>							

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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		Pestle and mortar					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		64,3					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,103					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		13		2			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		29/12/2023					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,887					
<i>Leaching agent volume (l)</i>							
pH (Unità)		8,8		0,1			
<i>pH (Unit)</i>							
Conducibilità (μS/cm)	-	265		63			
<i>Conductivity (μS/cm)</i>							
Temperatura (°C)		18,4					
<i>Temperature (°C)</i>							

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158080-003

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
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- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
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- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

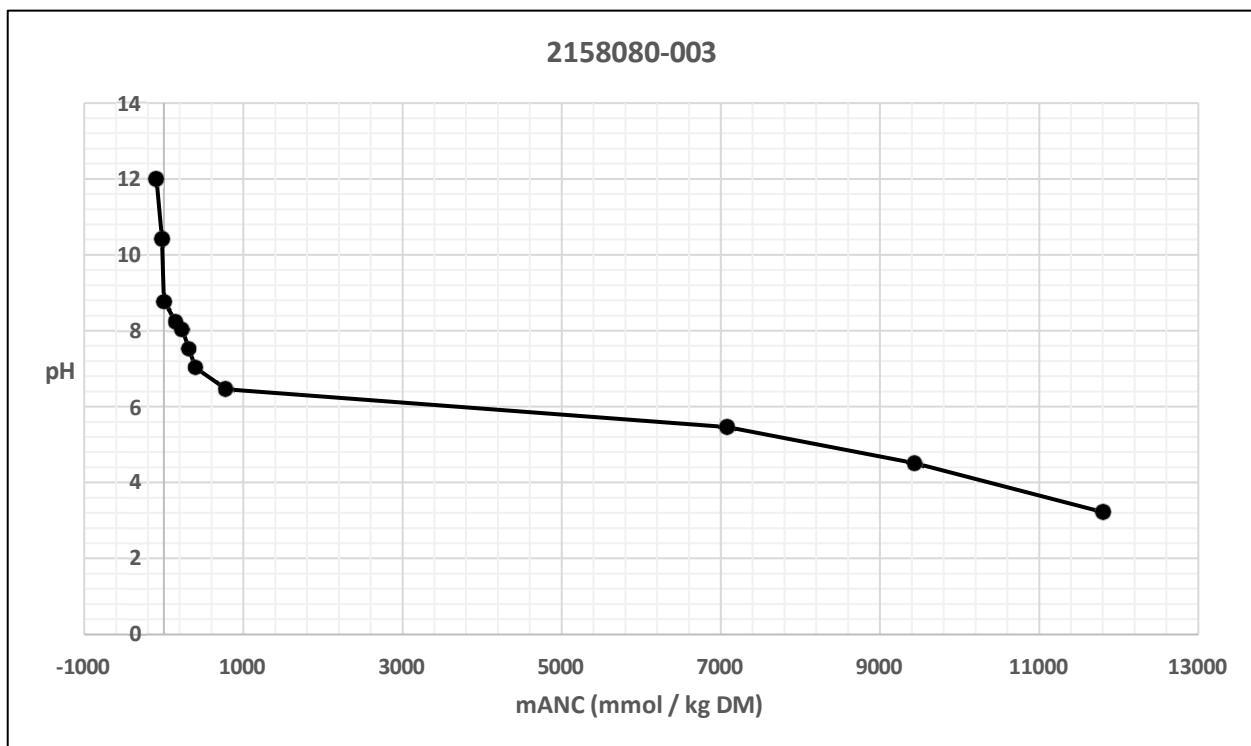
Test Finish Date: 11/01/2024

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 _i (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		8,23	8,03	7,51	7,03	6,46	5,46	4,51	3,22

ΔpH (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
ΔpH (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



Laboratory Technical Manager

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n°294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	0,029	mg/kg	0,006			
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	0,076	mg/kg	0,029			
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	280	mg/kg	49			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	11,0	mg/kg	2,8			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	151	mg/kg	26			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	25,5	mg/kg	4,1			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	1300	mg/kg	100			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN ISO 14402:2004	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	8,8	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,07					
<i>Mass of the laboratory sample (Kg)</i>							

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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		Pestle and mortar					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		62,5					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,103					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		12		2			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		29/12/2023					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,887					
<i>Leaching agent volume (l)</i>							
pH (Unità)		8,8		0,1			
<i>pH (Unit)</i>							
Conducibilità (μS/cm)	-	231		55			
<i>Conductivity (μS/cm)</i>							
Temperatura (°C)		18,4					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158080-004

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 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 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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOSE), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOSE), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

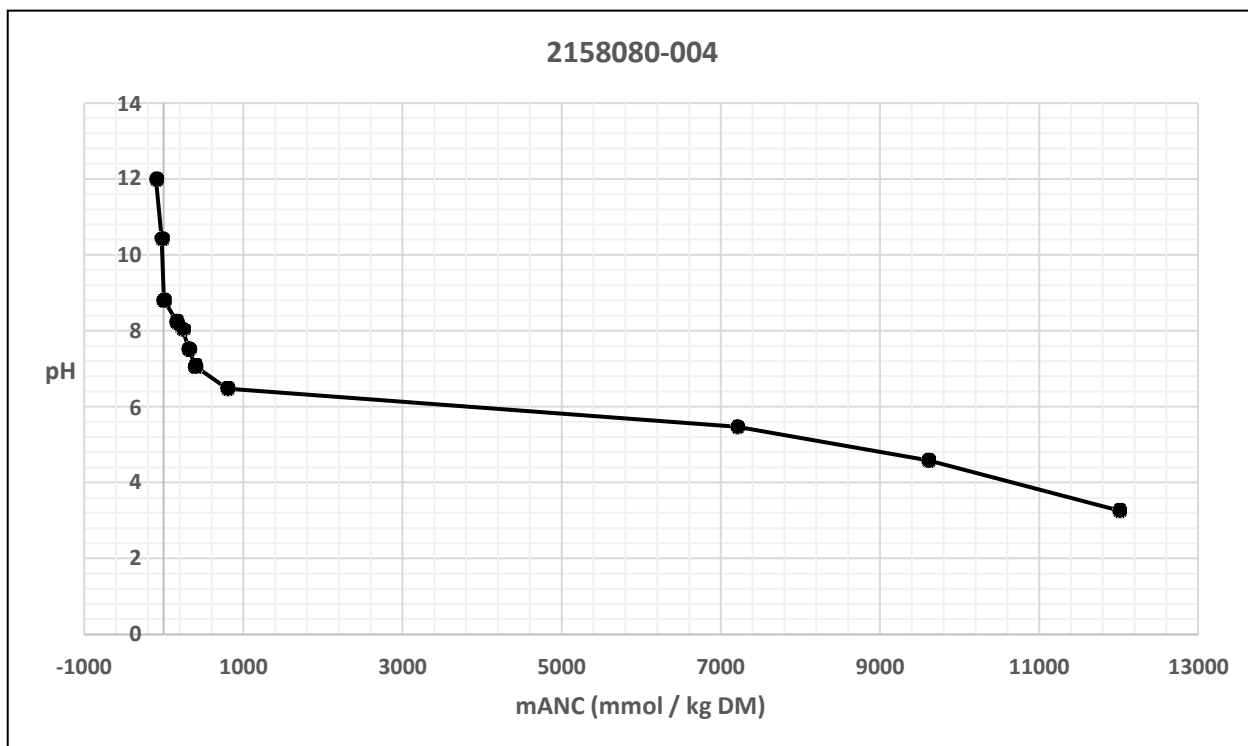
Test Finish Date: 11/01/2024

Test	1	2	LT	3	4	5	6	7	8	9	10
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	0,1601	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		8,24	8,04	7,53	7,06	6,47	5,47	4,58	3,26

ΔpH (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
ΔpH (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



Laboratory Technical Manager

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n°294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	301	mg/kg	52			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	7,4	mg/kg	1,8			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	353	mg/kg	61			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	48,4	mg/kg	7,8			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	1700	mg/kg	140			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN ISO 14402:2004	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	8,8	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,16					
<i>Mass of the laboratory sample (Kg)</i>							

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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		Pestle and mortar					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		52,5					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,098					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		8		1			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		29/12/2023					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,892					
<i>Leaching agent volume (l)</i>							
pH (Unità)		8,8		0,1			
<i>pH (Unit)</i>							
Conducibilità (μS/cm)	-	295		70			
<i>Conductivity (μS/cm)</i>							
Temperatura (°C)		18,4					
<i>Temperature (°C)</i>							

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158080-005

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

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.



Continuation of
Test Report n°:

2158080-005

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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-

Document with advanced digital signature in accordance with current legislation.

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

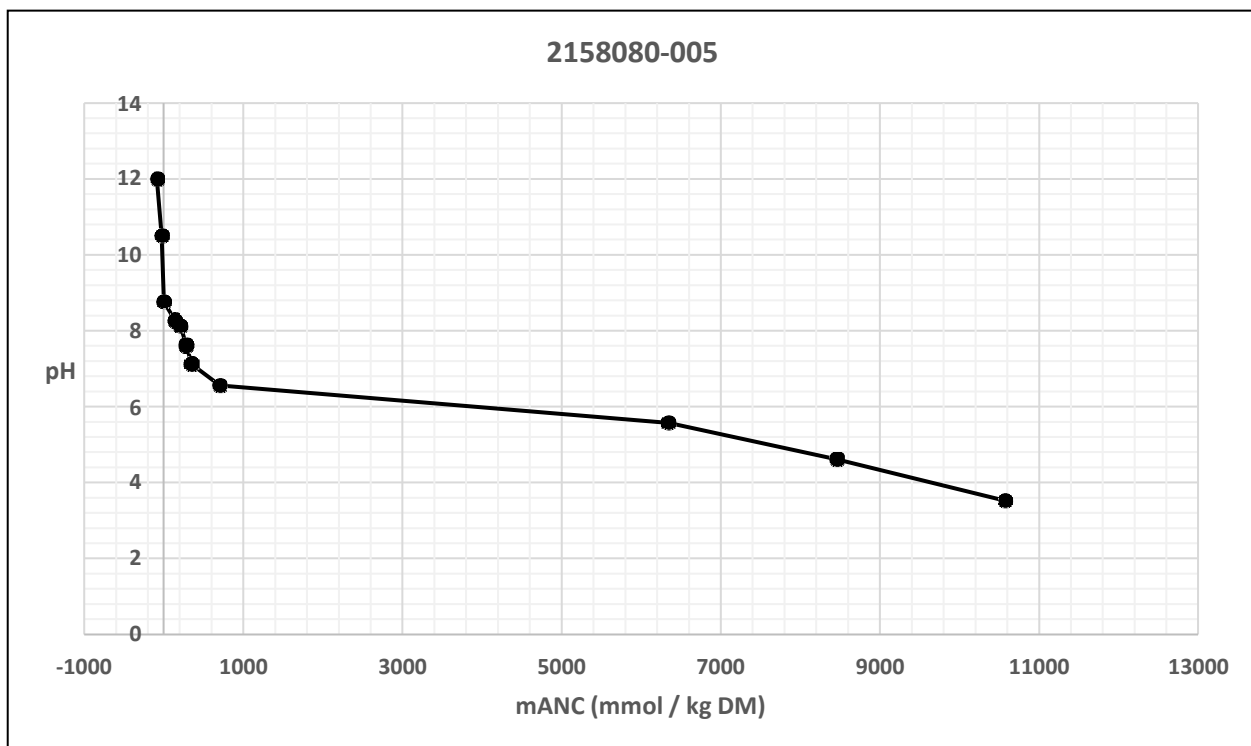
Test Finish Date: 11/01/2024

Test	1	2	LT	3	4	5	6	7	8	9	10
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	0,1410	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		8,27	8,13	7,61	7,11	6,56	5,57	4,61	3,52

ΔpH (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
ΔpH (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



Laboratory Technical Manager

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n°294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	0,15	mg/kg	0,03			
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	0,25	mg/kg	0,06			
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	330	mg/kg	57			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	9,1	mg/kg	2,2			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	348	mg/kg	61			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	51,6	mg/kg	8,3			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	1800	mg/kg	140			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN ISO 14402:2004	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,2	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,23					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		47,5					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,098					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		8		1			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		29/12/2023					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,892					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,2		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		305		72			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,4					
<i>Temperature (°C)</i>							

Document with advanced digital signature in accordance with current legislation.

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Continuation of
Test Report n°:

2158080-006

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

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.



Continuation of
Test Report n°:

2158080-006

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

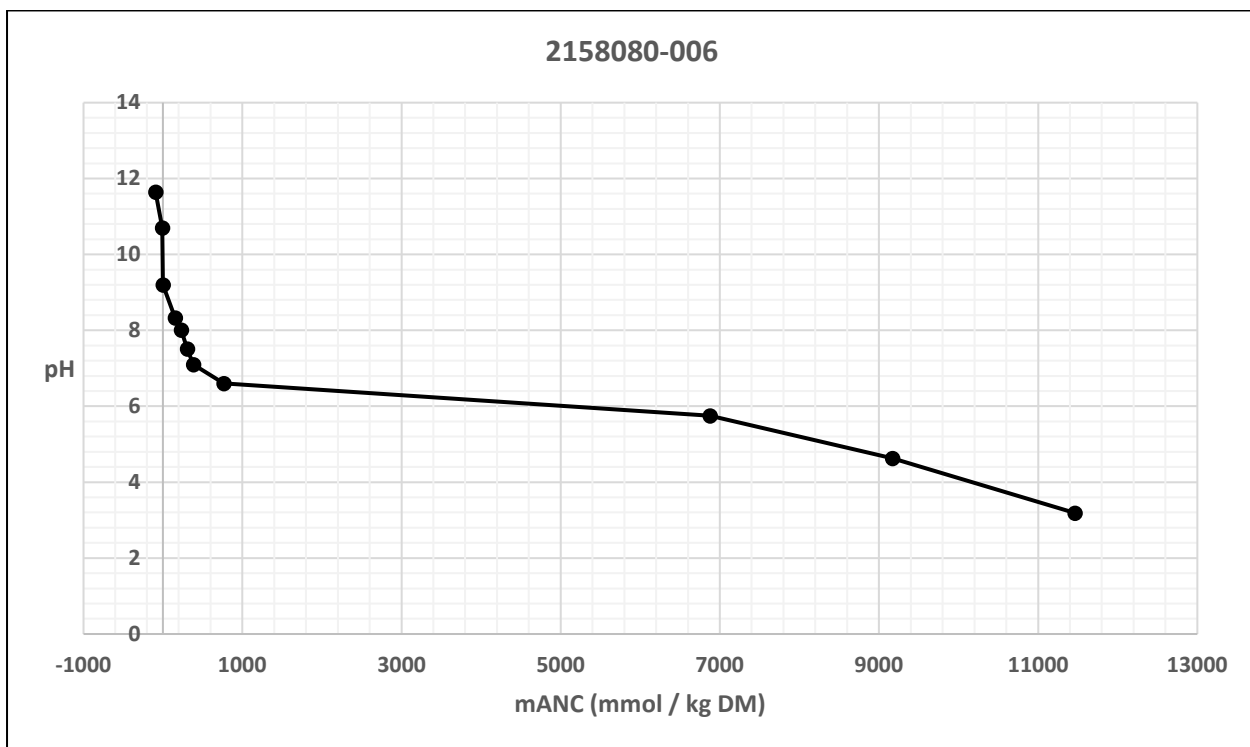
Test Finish Date: 18/01/2024

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		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



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n° 294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi
Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	0,11	mg/kg	0,03			
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	2,3	mg/kg	0,4			
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	1,4	mg/kg	0,4			
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	295	mg/kg	51			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	7,2	mg/kg	1,8			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	335	mg/kg	58			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	55,7	mg/kg	9,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	1900	mg/kg	150			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN ISO 14402:2004	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,0	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,25					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		41,9					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,097					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		7		1			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		29/12/2023					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,893					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,0		0,1			
<i>pH (Unit)</i>							
Conducibilità (μS/cm)		318		75			
<i>Conductivity (μS/cm)</i>							
Temperatura (°C)		18,4					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158080-007

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

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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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

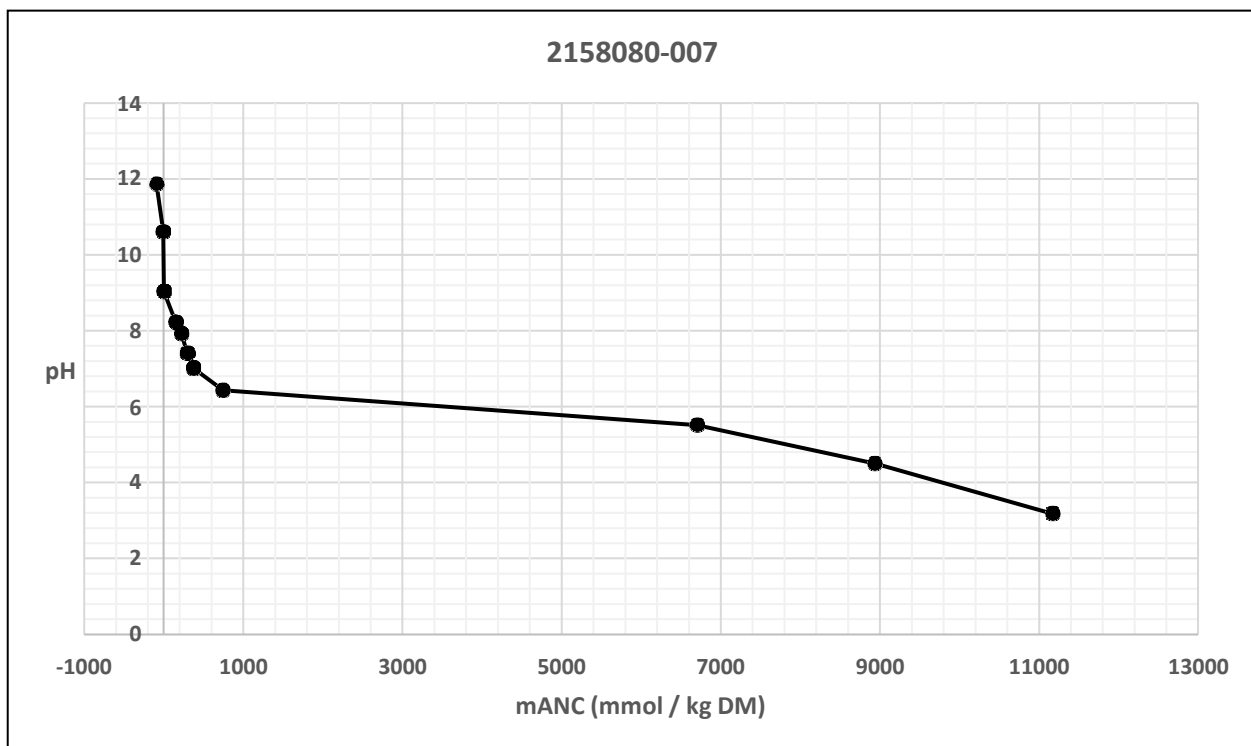
Test Finish Date: 18/01/2024

Test	1	2	LT	3	4	5	6	7	8	9	10
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	0,1490	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		8,23	7,92	7,40	7,01	6,43	5,51	4,50	3,18

ΔpH (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
ΔpH (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



Laboratory Technical Manager

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n°294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	0,063	mg/kg	0,018			
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	0,27	mg/kg	0,06			
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	628	mg/kg	110			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	6,9	mg/kg	1,7			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	463	mg/kg	81			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	58,9	mg/kg	9,5			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	3800	mg/kg	300			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN ISO 14402:2004	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	11,1	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,29					
<i>Mass of the laboratory sample (Kg)</i>							

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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		Pestle and mortar					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		75					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,096					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		6,0		0,9			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		29/12/2023					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,894					
<i>Leaching agent volume (l)</i>							
pH (Unità)		11,1		0,1			
<i>pH (Unit)</i>							
Conducibilità (μS/cm)	-	635		150			
<i>Conductivity (μS/cm)</i>							
Temperatura (°C)		18,4					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158080-008

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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
HNO ₃ Concentration (mol / L)	/	/	5	5	5	5	5	5	5	5	5
HNO ₃ Volume (mL)	/	/	2	5	10	50	75	100	125	150	200
mol HNO ₃ (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

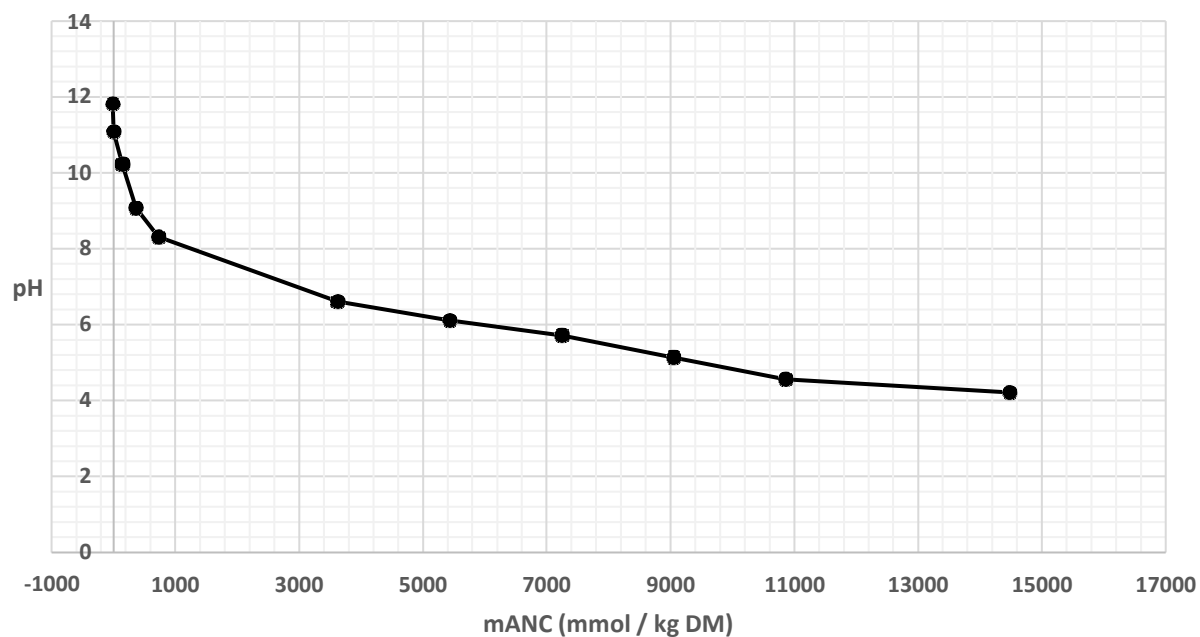
pH (t _{0+4h})	11,90	pH LT	10,39	9,09	8,06	6,29	5,87	5,39	5,01	4,31	3,98
pH (t _{0+44h})	11,86		10,26	9,11	8,35	6,60	6,16	5,71	5,16	4,58	4,23
pH (t _{0+48h})	11,81	11,08	10,23	9,07	8,31	6,61	6,11	5,71	5,13	4,56	4,21

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



2158080-008



Laboratory Technical Manager

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n°294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	362	mg/kg	63			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	5,6	mg/kg	1,4			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	363	mg/kg	63			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	31,6	mg/kg	5,1			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	2000	mg/kg	160			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN ISO 14402:2004	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	8,6	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,12					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		43,7					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,095					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		4,9		0,7			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		29/12/2023					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,895					
<i>Leaching agent volume (l)</i>							
pH (Unità)		8,6		0,1			
<i>pH (Unit)</i>							
Conducibilità (μS/cm)		338		80			
<i>Conductivity (μS/cm)</i>							
Temperatura (°C)		18,4					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158080-009

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

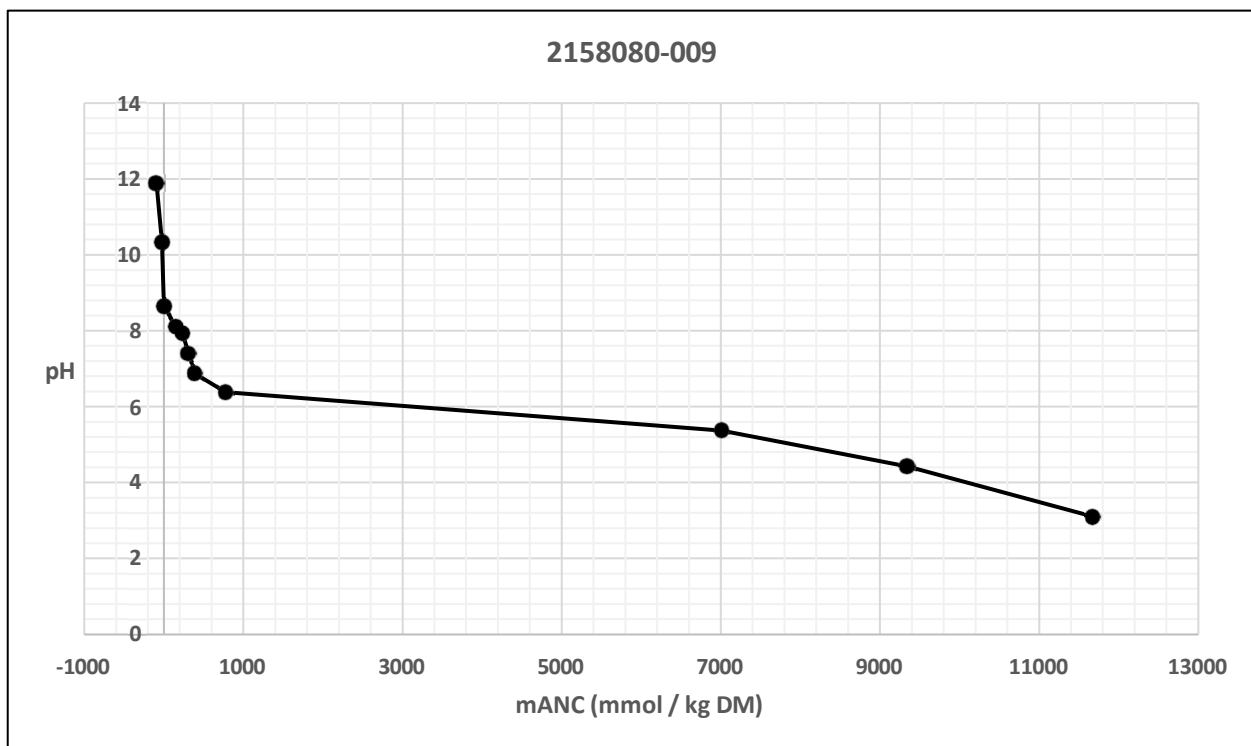
Test Finish Date: 18/01/2024

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 _i (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		8,11	7,94	7,40	6,87	6,38	5,37	4,42	3,10

ΔpH (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
ΔpH (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



Laboratory Technical Manager

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n°294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132



**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

➤ MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
➤ MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
➤ MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
➤ Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
➤ Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	305	mg/kg	53			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	5,3	mg/kg	1,3			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	283	mg/kg	49			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	24,2	mg/kg	3,9			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	1600	mg/kg	130			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN ISO 14402:2004	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	8,5	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,16					
<i>Mass of the laboratory sample (Kg)</i>							

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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		Pestle and mortar					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		40,1					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,094					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		4,3		0,7			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		29/12/2023					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,896					
<i>Leaching agent volume (l)</i>							
pH (Unità)		8,5		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		281		66			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,4					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158080-010

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 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 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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
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- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



Attached Test Report n. 2158080-010

Acid Neutralization Capacity

Method: UNI CEN/TS 15364 2006

Test Start Date: 15/01/2024

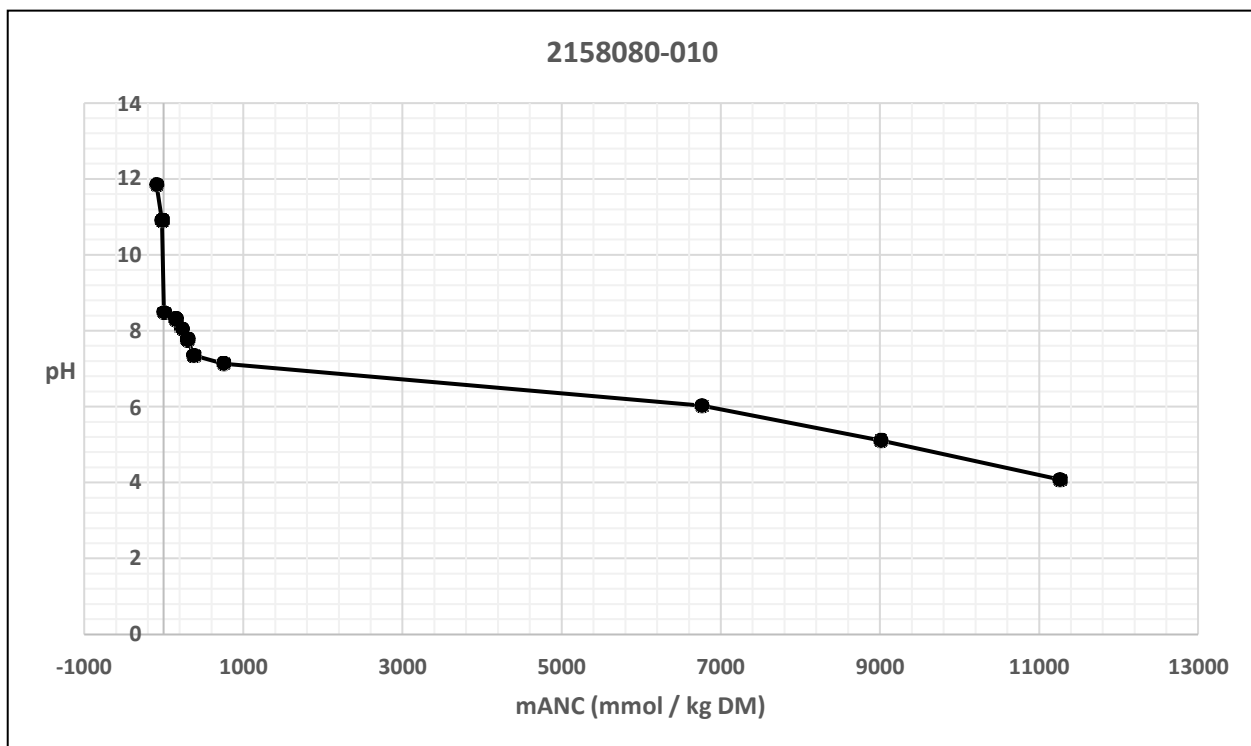
Test Finish Date: 18/01/2024

Test	1	2	LT	3	4	5	6	7	8	9	10
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	0,1501	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		8,31	8,06	7,77	7,35	7,13	6,03	5,11	4,08

ΔpH (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
ΔpH (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



Laboratory Technical Manager

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n°294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	85	mg/kg	15			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	5,3	mg/kg	1,3			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	62	mg/kg	11			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	8,2	mg/kg	3,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	400	mg/kg	32			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	8,8	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,09					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		37					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,095					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		5,5		0,9			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,895					
<i>Leaching agent volume (l)</i>							
pH (Unità)		8,8		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		104		25			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158270-001

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 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 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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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 (g,h) 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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
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- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
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- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

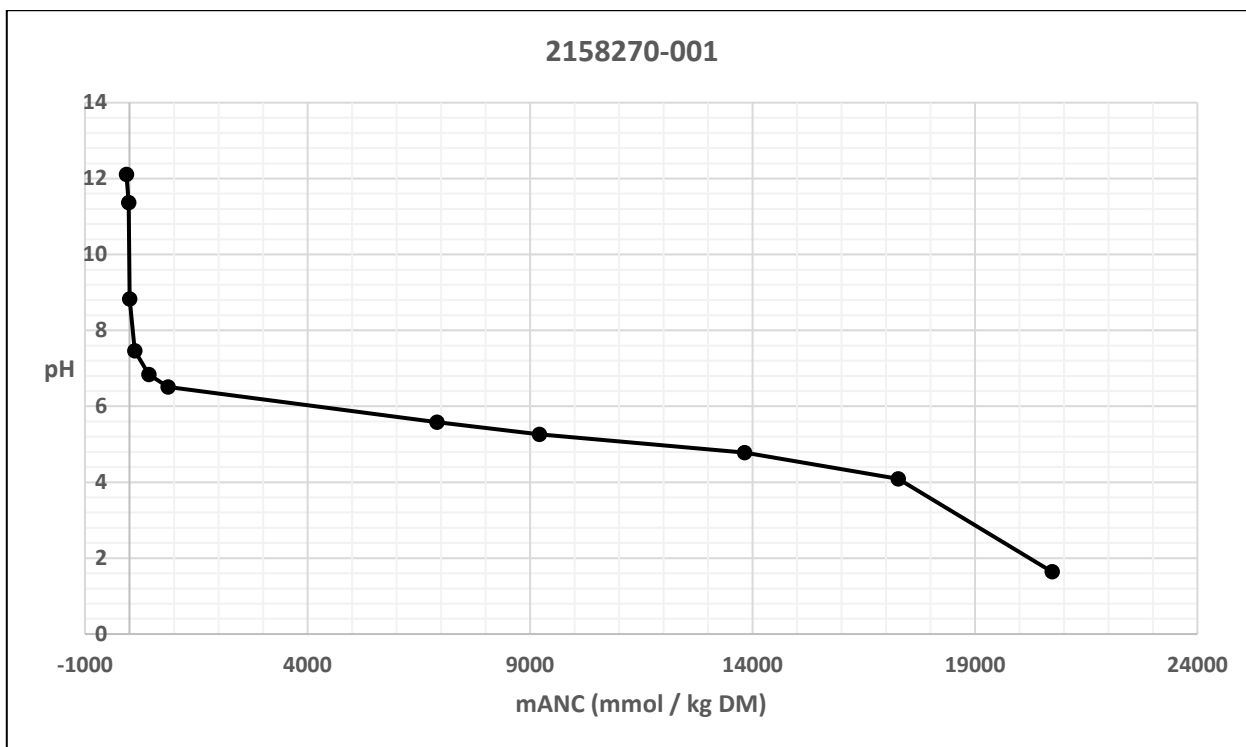
End Test Date: 25/01/2024

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 _i (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	4,09	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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	83	mg/kg	14			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	5,4	mg/kg	1,3			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	60	mg/kg	10			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	9,1	mg/kg	3,2			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	440	mg/kg	35			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	8,8	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,14					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		39,5					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,095					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		5,2		0,8			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,895					
<i>Leaching agent volume (l)</i>							
pH (Unità)		8,8		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		101		24			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158270-002

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 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 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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Diendan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

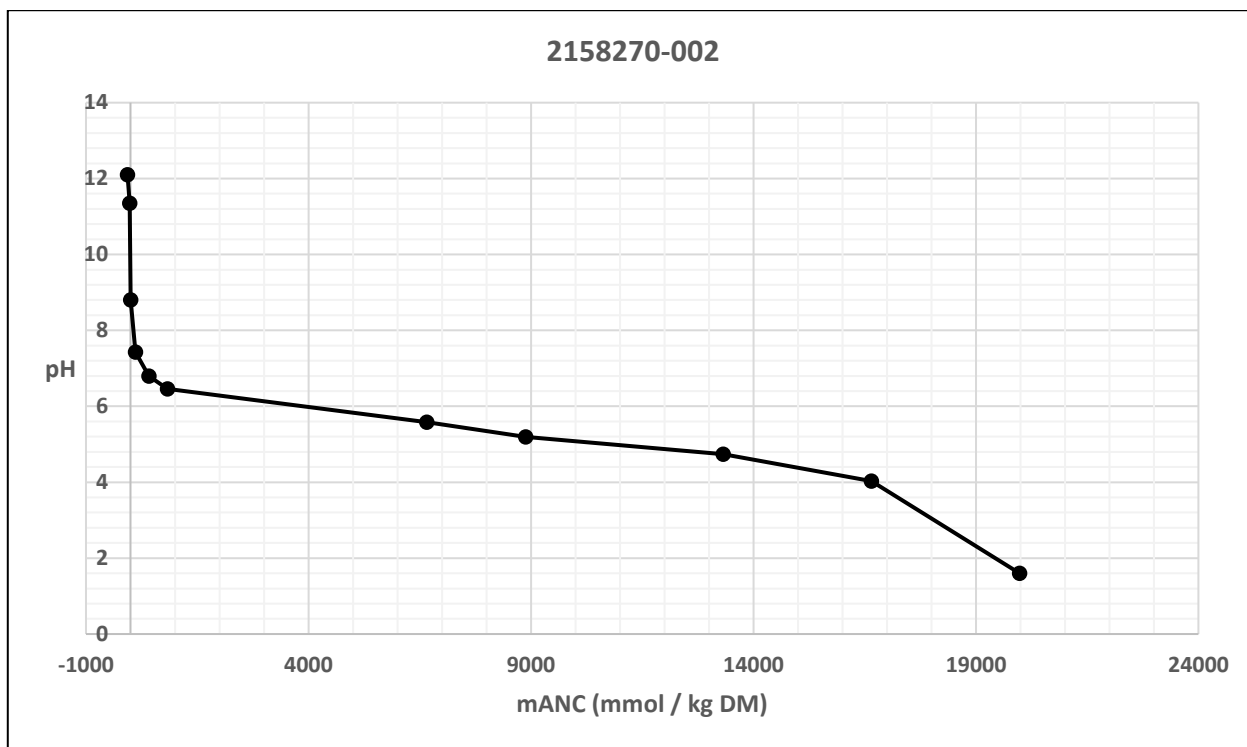
End Test Date: 25/01/2024

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 _i (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	4,03	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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	73	mg/kg	13			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	6,1	mg/kg	1,5			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	47,0	mg/kg	8,1			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	4,9	mg/kg	2,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	320	mg/kg	26			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,1	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,17					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		33,7					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,094					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		4,1		0,6			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,896					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,1		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		93		22			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158270-003

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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°:

2158270-003

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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) 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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158270-003

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
Permethrin, cis-Nonachlor, Chlordecone, Chlorobenzylate, Cloroneb, Chlorotalonil, Dactal, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

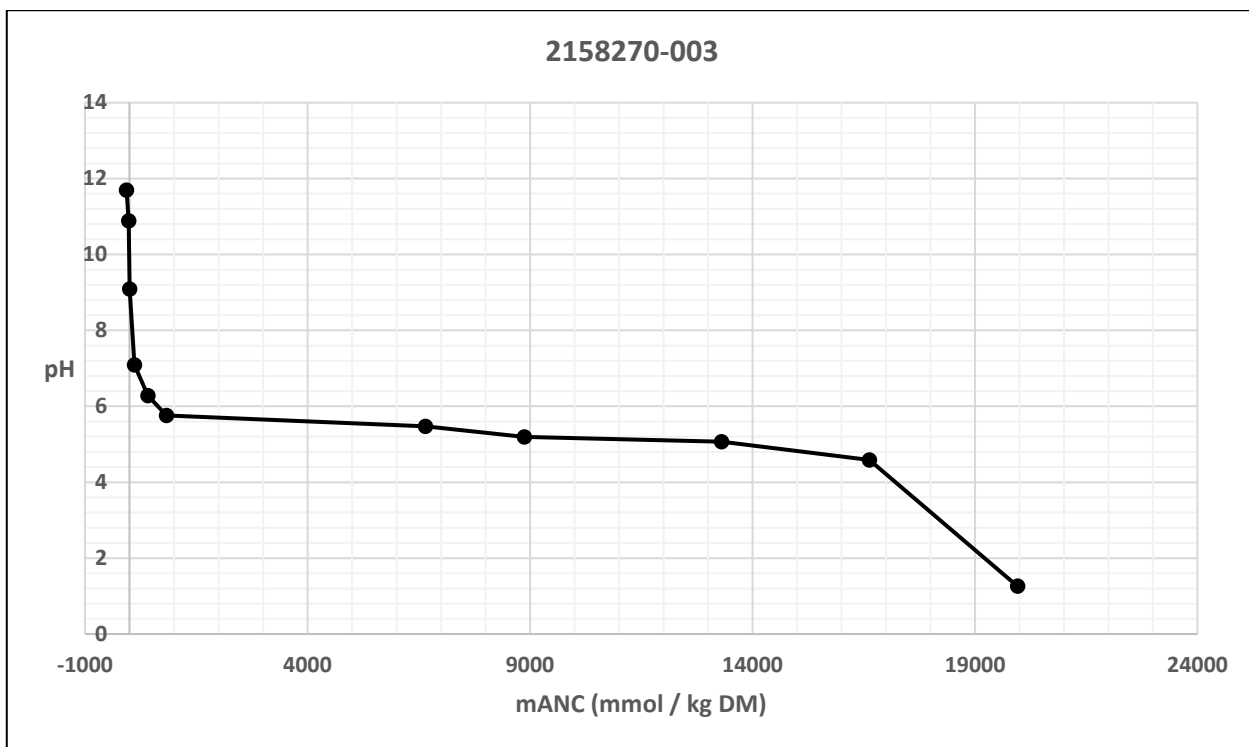
End Test Date: 25/01/2024

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 _i (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		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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	82	mg/kg	14			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	6,2	mg/kg	1,5			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	46,0	mg/kg	8,0			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	4,8	mg/kg	2,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	300	mg/kg	24			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,2	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,12					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		35,7					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,094					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		3,8		0,6			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,896					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,2		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		92		22			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158270-004

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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.
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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 $\leq$ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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 (g,h) 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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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-Chlordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

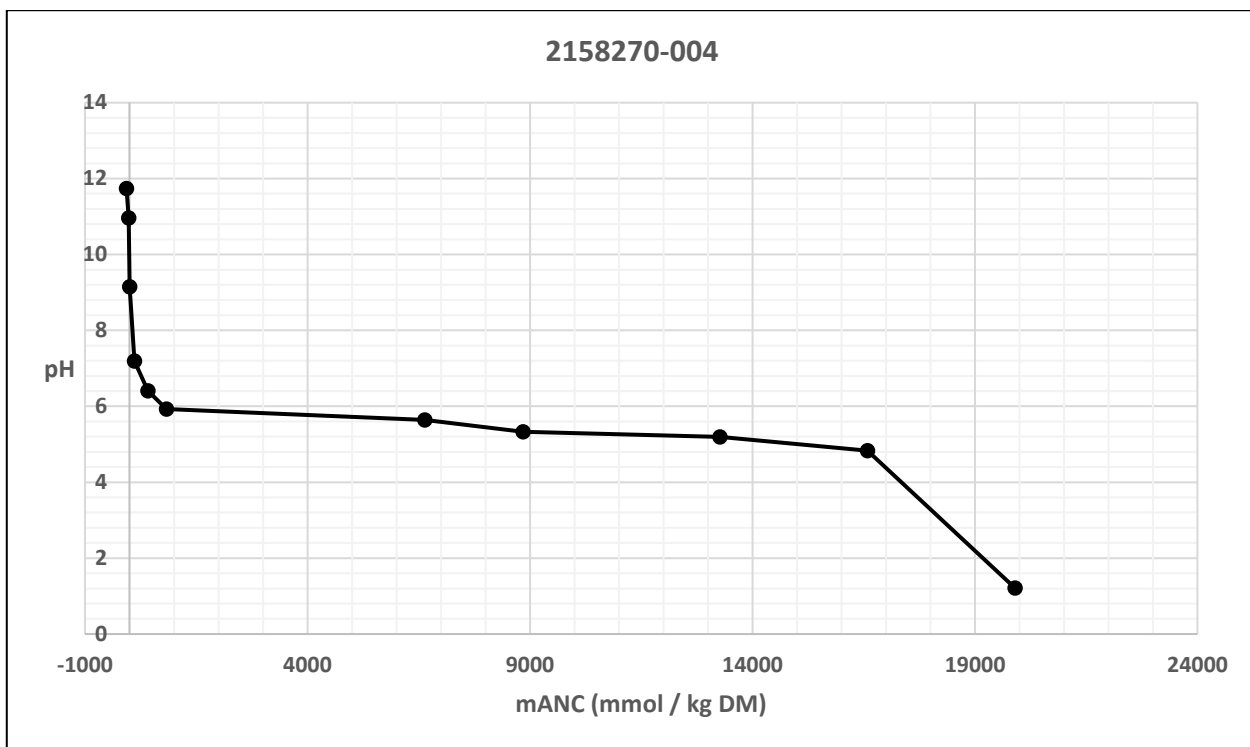
End Test Date: 25/01/2024

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 _i (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		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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



**Chimica
Applicata
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➤ MASAF Elenco Laboratori designati al rilascio di Certificati Analisi
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➤ Regione Sicilia - Elenco laboratori che eseguono analisi
Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim
Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	80	mg/kg	14			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	5,7	mg/kg	1,4			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	48,0	mg/kg	8,4			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	5,2	mg/kg	2,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	280	mg/kg	22			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,1	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,15					
<i>Mass of the laboratory sample (Kg)</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		45,5					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,093					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		2,8		0,4			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,897					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,1		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		93		22			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158270-005

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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.
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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 $\leq$ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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 (g,h) 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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

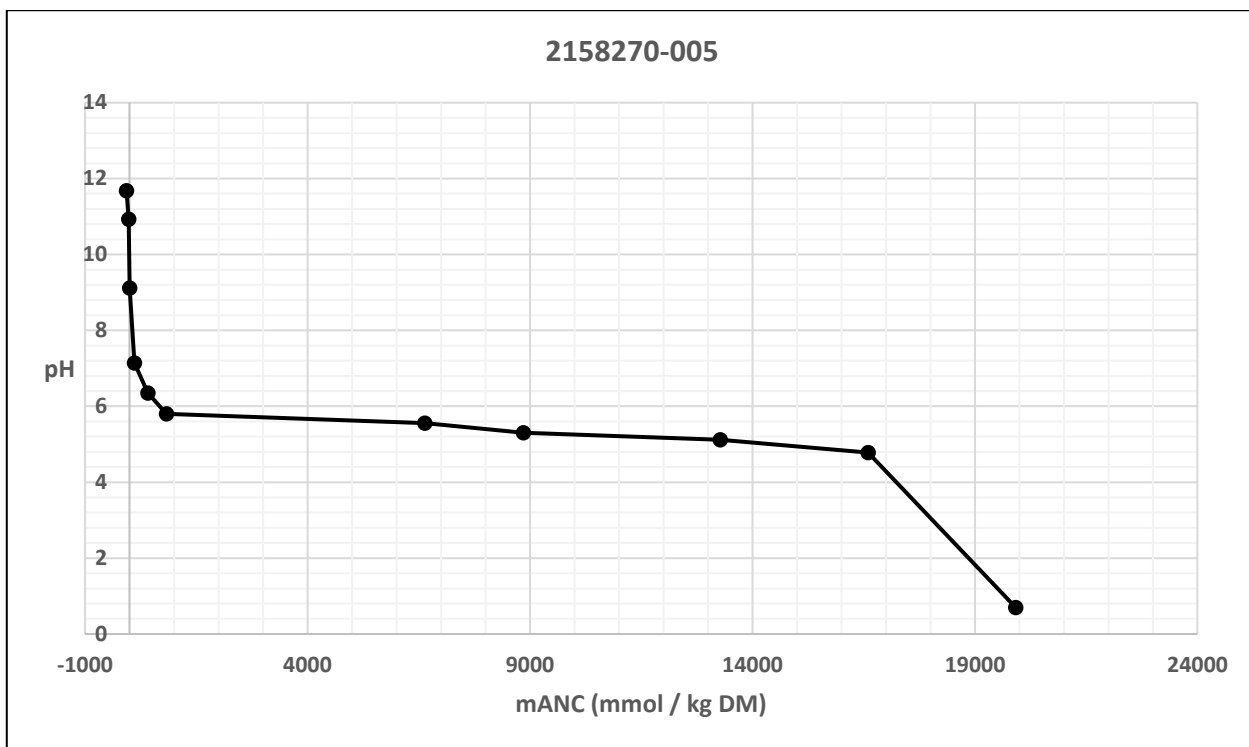
End Test Date: 01/02/2024

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 _i (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		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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	79	mg/kg	14			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	5,8	mg/kg	1,4			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	47,0	mg/kg	8,1			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	5,0	mg/kg	2,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	380	mg/kg	30			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,2	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,13					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		44,2					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,093					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		3,3		0,5			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,897					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,2		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		94		22			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158270-006

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

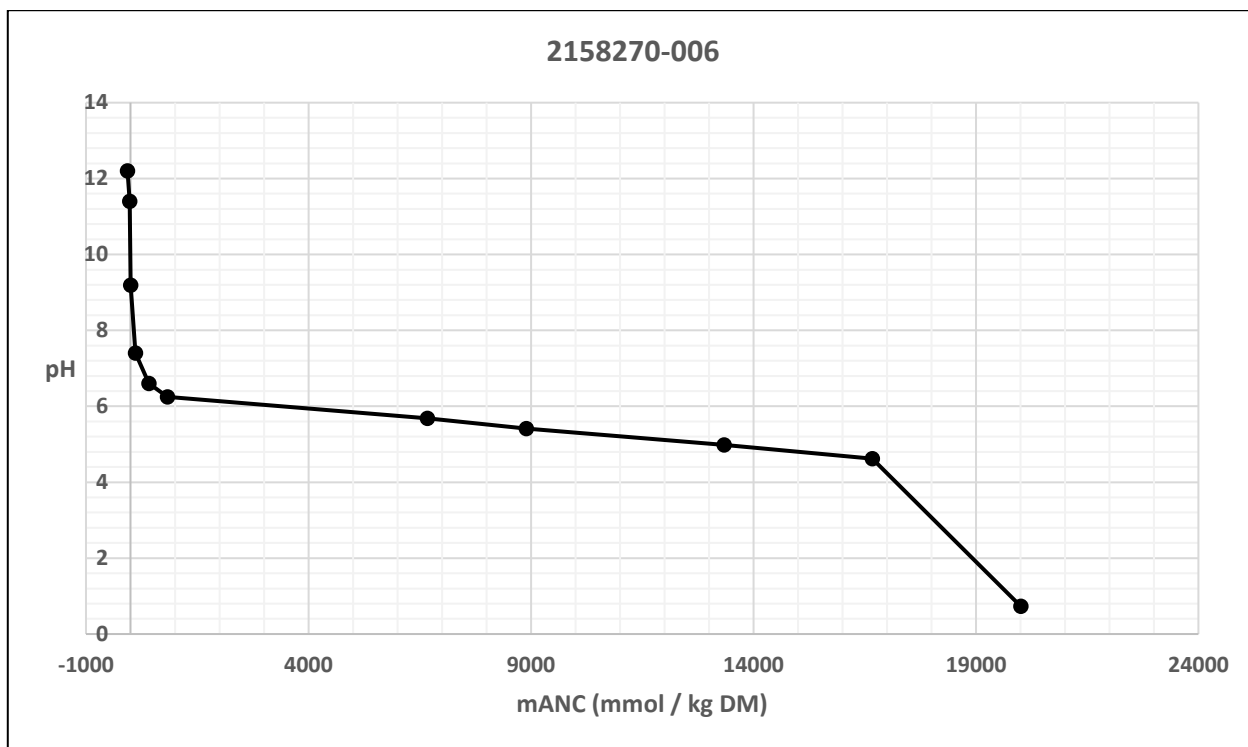
End Test Date: 01/02/2024

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 _i (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		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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	38,0	mg/kg	6,7			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	5,1	mg/kg	1,2			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	36,0	mg/kg	6,3			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	12,1	mg/kg	4,3			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	440	mg/kg	35			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	8,6	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,25					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		80,6					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,096					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		7		1			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,894					
<i>Leaching agent volume (l)</i>							
pH (Unità)		8,6		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		91		21			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158270-007

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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"SS" = dry matter

"TQ" = as it is

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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.
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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 $\leq$ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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 (g,h) 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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

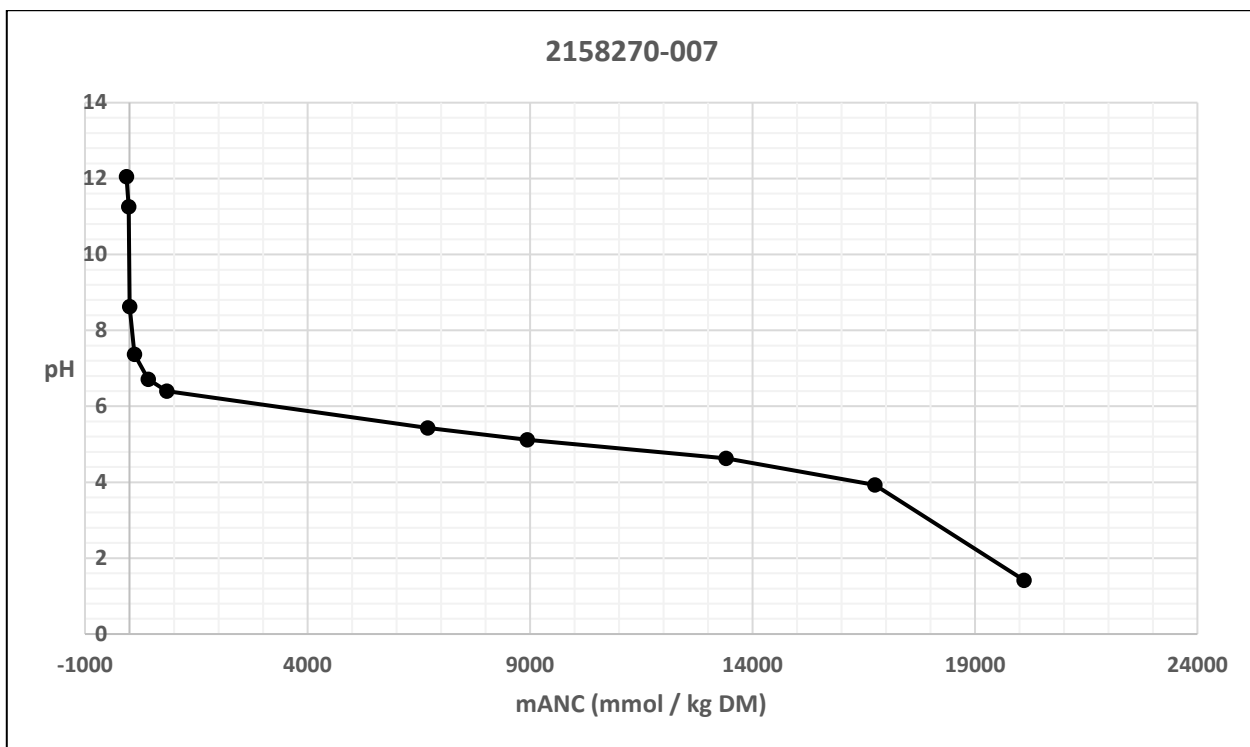
End Test Date: 01/02/2024

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 _i (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

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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	35,0	mg/kg	6,0			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	6,4	mg/kg	1,6			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	46,0	mg/kg	8,1			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	11,3	mg/kg	4,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	460	mg/kg	37			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,1	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,23					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		82,5					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,095					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		5,3		0,8			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,895					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,1		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		80		19			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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**Chimica
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- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158270-008

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 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 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.
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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 $\leq$ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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 (g,h) 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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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-Chlordane, alpha-Hexachlorocyclohexane, beta-Hexachlorocyclohexane, delta-Hexachlorocyclohexane, gamma-Hexachlorocyclohexane Butachlor, cis-Permethrin, trans-

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

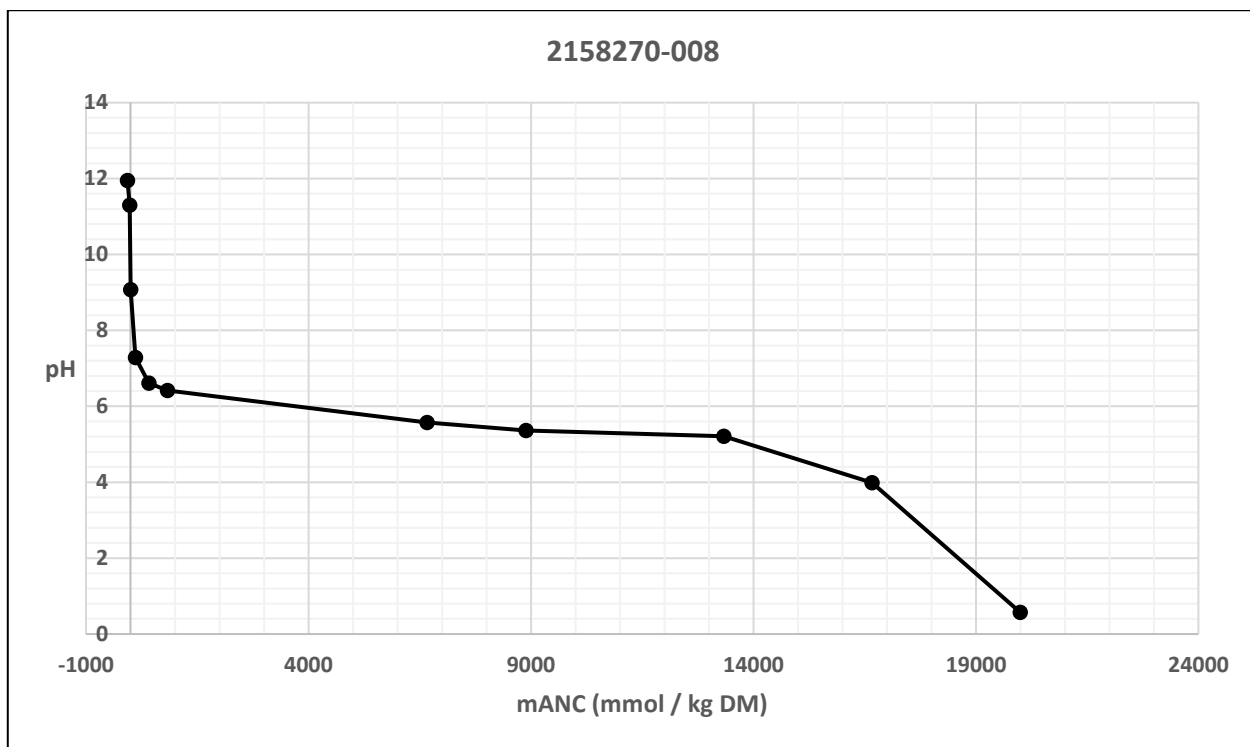
End Test Date: 01/02/2024

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 _i (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		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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	194	mg/kg	34			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	6,8	mg/kg	1,7			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	59	mg/kg	10			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	6,2	mg/kg	2,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	540	mg/kg	43			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,2	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,15					
<i>Mass of the laboratory sample (Kg)</i>							

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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		Pestle and mortar					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		42,3					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,093					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		2,8		0,4			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,897					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,2		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		127		30			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158270-009

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 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 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.
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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 $\leq$ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
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di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
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LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

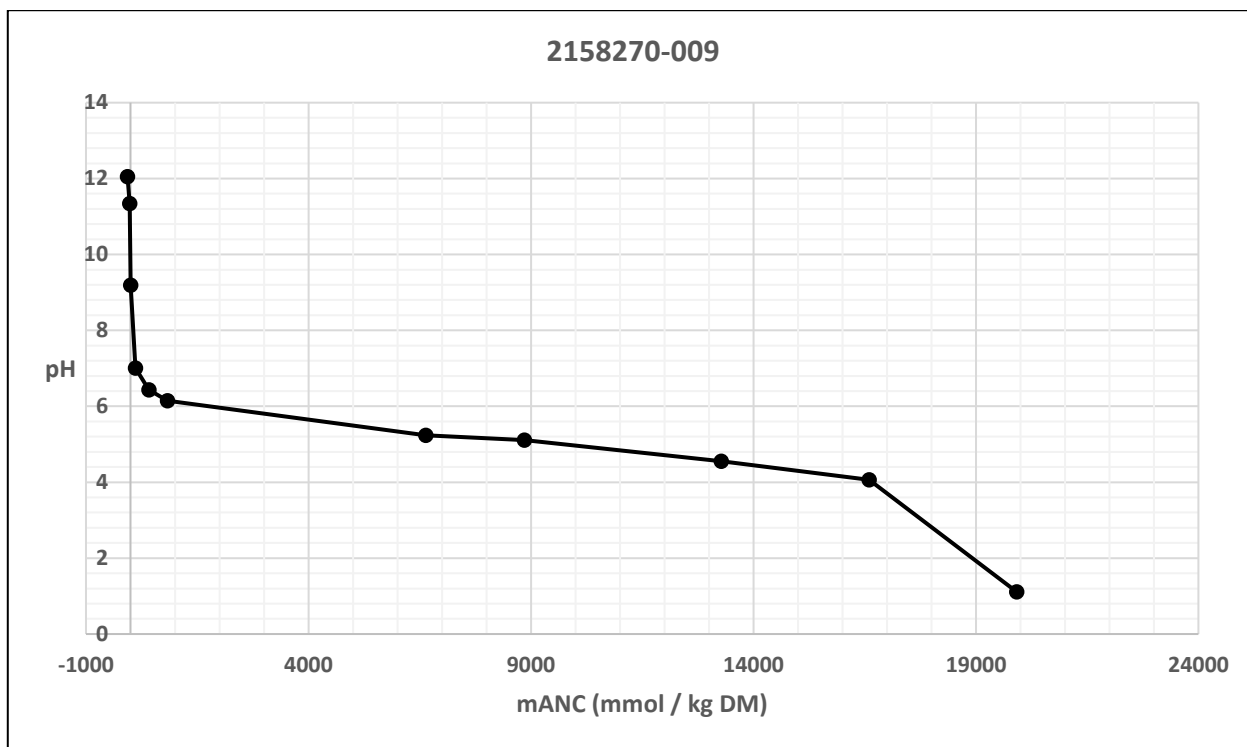
End Test Date: 08/02/2024

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 _i (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		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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



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LAB N° 0439 L

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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	176	mg/kg	31			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	6,6	mg/kg	1,6			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	49,0	mg/kg	8,6			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	4,3	mg/kg	2,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	560	mg/kg	45			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,3	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,29					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		29,4					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,092					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		2,4		0,4			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,898					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,3		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		123		29			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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LAB N° 0439 L

Continuation of
Test Report n°:

2158270-010

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 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 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.
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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 $\leq$ than 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

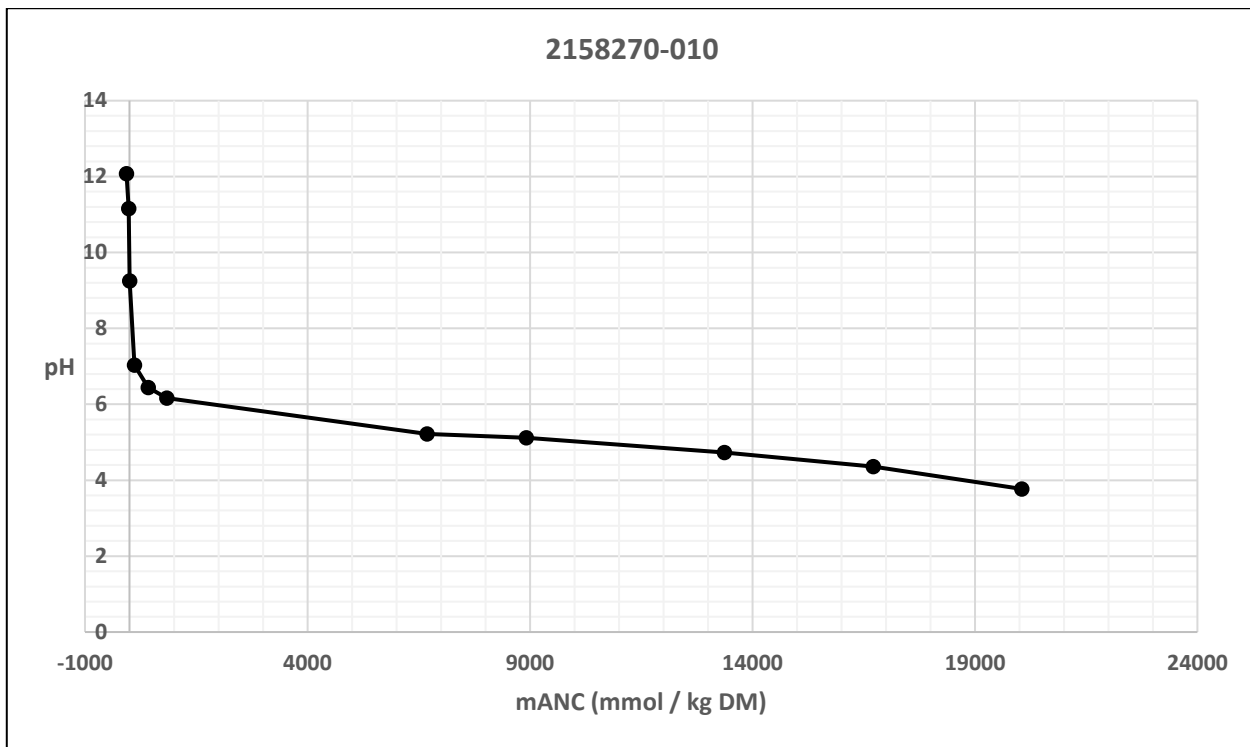
End Test Date: 08/02/2024

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 _i (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	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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	0,026	mg/kg	0,005			
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	203	mg/kg	35			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	5,8	mg/kg	1,4			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	43,0	mg/kg	7,5			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	5,3	mg/kg	2,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	600	mg/kg	48			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,2	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,28					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		31,2					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,093					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		2,9		0,4			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,897					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,2		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		122		29			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158270-011

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

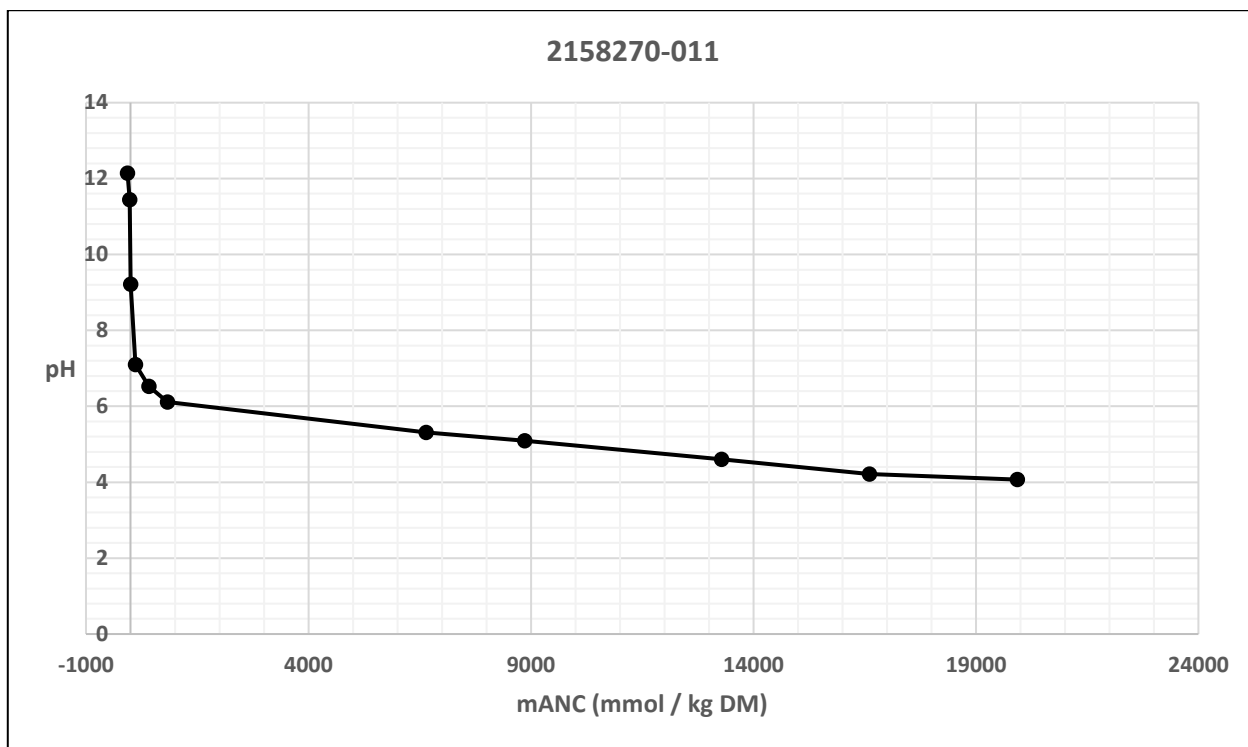
End Test Date: 08/02/2024

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 _i (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	4,07

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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico Ordine Interprovinciale dei Chimici della Sicilia Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
Parametri di ammissibilità sull'eluato da test di cessione UNI EN 12457-2:2004							
<i>Leachability Test Method UNI EN 12457-2:2004</i>							
Arsenico TC	UNI EN ISO 17294-2:2016	0,028	mg/kg	0,006			
<i>Arsenic LT</i>							
Antimonio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Antimony LT</i>							
Bario TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Barium LT</i>							
Cadmio TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Cadmium LT</i>							
Cromo TC	UNI EN ISO 17294-2:2016	< 0,0005	mg/kg				
<i>Chromium LT</i>							
Mercurio TC	UNI EN ISO 17294-2:2016	< 0,0001	mg/kg				
<i>Mercury LT</i>							
Molibdeno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Molybdenum LT</i>							

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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				
<i>Nickel LT</i>							
Piombo TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Lead LT</i>							
Rame TC	UNI EN ISO 17294-2:2016	< 0,005	mg/kg				
<i>Copper LT</i>							
Stagno TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Tin LT</i>							
Selenio TC	UNI EN ISO 17294-2:2016	< 0,001	mg/kg				
<i>Selenium LT</i>							
Zinco TC	UNI EN ISO 17294-2:2016	< 0,01	mg/kg				
<i>Zinc LT</i>							
Cloruro TC	UNI EN ISO 10304-1:2009	219	mg/kg	38			
<i>Chloride LT</i>							
Fluoruro TC	UNI EN ISO 10304-1:2009	6,0	mg/kg	1,5			
<i>Fluoride LT</i>							
Solfato TC	UNI EN ISO 10304-1:2009	44,0	mg/kg	7,6			
<i>Sulphate LT</i>							
DOC TC	UNI EN 1484:1999	5,0	mg/kg	2,0			
<i>DOC LT</i>							
TDS TC	APAT CNR IRSA 2090 A Man 29 2003	560	mg/kg	45			
<i>TDS LT (Total soluble fraction)</i>							
Indice di fenolo TC	UNI EN 16192:2012 + ISO 6439:1990	< 0,01	mg/kg				
<i>Phenol Index LT</i>							
pH TC	UNI EN ISO 10523:2012	9,2	unità	0,1			
<i>pH LT</i>							
(*) Capacità di neutralizzazione acido (ANC) TC	UNI CEN/TS 15364:2006	See attached	mol/kg				
<i>Capability of Acid neutralization (ANC) TC</i>							
Dati preparazione eluato secondo UNI EN 12457-2:2004							
<i>Eluate preparation data according to UNI EN 12457 - 2:2004</i>							
Massa del campione di laboratorio (Kg)		1,32					
<i>Mass of the laboratory sample (Kg)</i>							

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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					
<i>Size reduction method</i>							
Frazione maggiore di 4mm (%)		30,4					
<i>Fraction greater than 4mm (%)</i>							
Frazione materiale non macinabile (%)		0					
<i>Non-grind material fraction (%)</i>							
Massa grezza Mw della porzione di prova (kg)		0,092					
<i>Raw mass Mw of the test portion (kg)</i>							
Rapporto del contenuto di umidità MC (%)		2,7		0,4			
<i>MC moisture content ratio (%)</i>							
Data della prova che ha prodotto l'eluato		16/01/2024					
<i>Date of the test which produced the eluate</i>							
Volume agente lisciviante (l)		0,898					
<i>Leaching agent volume (l)</i>							
pH (Unità)		9,2		0,1			
<i>pH (Unit)</i>							
Conducibilità (µS/cm)		127		30			
<i>Conductivity (µS/cm)</i>							
Temperatura (°C)		18,5					
<i>Temperature (°C)</i>							

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Continuation of
Test Report n°:

2158270-012

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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 diastereoisomers 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-Chlordane".

"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-MeFOA), N-Ethylperfluoro-1-octanesulfonamide (N-EtFOA), 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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**Chimica
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Depurazione
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- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

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, Dielidan 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- Tricloroethane, 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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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

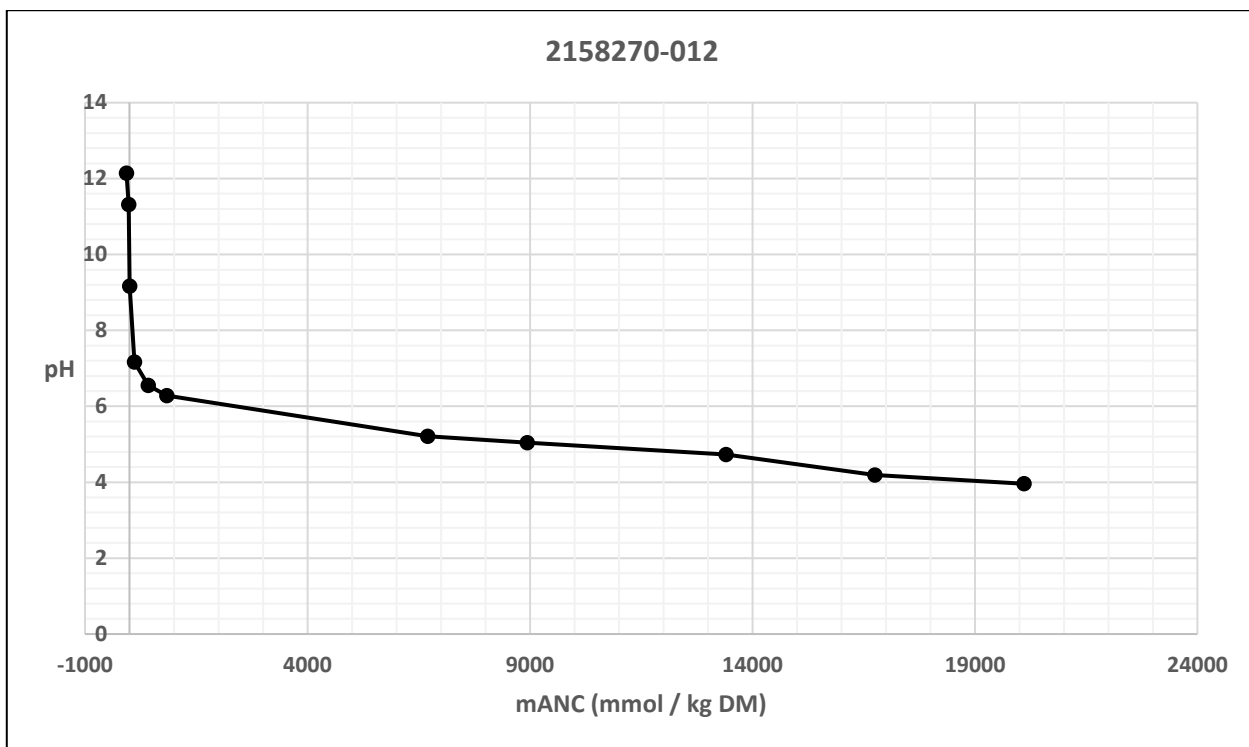
End Test Date: 08/02/2024

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 _i (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		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.



Laboratory Technical Manager
Dott. Giuseppe Rocca
Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo n°294

Laboratory Director
Dott.ssa Margherita Augello
Ordine Nazionale dei Biologi
Albo professionale N.036132



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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	2,80	mg/kg	0,60			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,2	mg/kg				
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	22,0	mg/kg	4,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	3,20	mg/kg	0,70			
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	27,0	mg/kg	7,0			
<i>Zinc</i>							
ANIONI							
ANIONS							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,170	mg/kg	0,060			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,180	mg/kg	0,063			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,110	mg/kg	0,039			
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,059	mg/kg	0,021			
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,096	mg/kg	0,034			
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,130	mg/kg	0,046			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,086	mg/kg	0,030			
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,180	mg/kg	0,063			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,32	mg/kg	0,11			
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,280	mg/kg	0,098			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	64	mg/kg	22			
<i>Mineral Oils (C10÷40)</i>							

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Continuation of
Test Report n°:

2158081-001

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-001

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, mono-octyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	3,10	mg/kg	0,70			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,2	mg/kg				
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	22,0	mg/kg	4,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	11,0	mg/kg	2,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	3,70	mg/kg	0,80			
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	28,0	mg/kg	7,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,074	mg/kg	0,026			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,110	mg/kg	0,039			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,058	mg/kg	0,020			
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,035	mg/kg	0,012			
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,063	mg/kg	0,022			
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,059	mg/kg	0,021			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,052	mg/kg	0,018			
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,074	mg/kg	0,026			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,38	mg/kg	0,13			
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,093	mg/kg	0,033			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	133	mg/kg	47			
<i>Mineral Oils (C10÷40)</i>							

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Continuation of
Test Report n°:

2158081-002

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-002

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, mono-octyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	5,7	mg/kg	1,3			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,280	mg/kg	0,080			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	48,0	mg/kg	9,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	23,0	mg/kg	4,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	6,7	mg/kg	1,4			
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	60	mg/kg	16			
<i>Zinc</i>							
ANIONI							
ANIONS							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,079	mg/kg	0,028			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,062	mg/kg	0,022			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,031	mg/kg	0,011			
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,055	mg/kg	0,019			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,095	mg/kg	0,033			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,47	mg/kg	0,16			
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,160	mg/kg	0,056			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	61	mg/kg	21			
<i>Mineral Oils (C10÷40)</i>							

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
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- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-003

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

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"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:

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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.

Document with advanced digital signature in accordance with current legislation.

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-003

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, mono-octyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	5,5	mg/kg	1,2			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,310	mg/kg	0,090			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	46,0	mg/kg	9,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	22,0	mg/kg	4,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	6,3	mg/kg	1,3			
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	59	mg/kg	16			
<i>Zinc</i>							
ANIONI							
ANIONS							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,067	mg/kg	0,023			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,055	mg/kg	0,019			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0280	mg/kg	0,0098			
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,047	mg/kg	0,016			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,070	mg/kg	0,025			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,31	mg/kg	0,11			
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,120	mg/kg	0,042			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	67	mg/kg	23			
<i>Mineral Oils (C10÷40)</i>							

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Continuation of
Test Report n°:

2158081-004

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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**Chimica
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- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-004

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, mono-octyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	2,60	mg/kg	0,60			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,260	mg/kg	0,070			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	37,0	mg/kg	7,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	11,0	mg/kg	2,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	36,0	mg/kg	6,0			
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	1,10	mg/kg	0,40			
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	70	mg/kg	19			
<i>Zinc</i>							
ANIONI							
ANIONS							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0270	mg/kg	0,0095			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0250	mg/kg	0,0088			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0200	mg/kg	0,0070			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0270	mg/kg	0,0095			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,38	mg/kg	0,13			
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,048	mg/kg	0,017			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	0,280	%	0,050			
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	< 1	mg/kg				
<i>Mineral Oils (C10÷40)</i>							

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-005

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 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 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.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, mono-octyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	3,30	mg/kg	0,90			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,340	mg/kg	0,090			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	25,0	mg/kg	5,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	15,0	mg/kg	3,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	17,0	mg/kg	3,0			
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	2,10	mg/kg	0,70			
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	52	mg/kg	14			
<i>Zinc</i>							
ANIONI							
ANIONS							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,043	mg/kg	0,015			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,039	mg/kg	0,014			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,032	mg/kg	0,011			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,045	mg/kg	0,016			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0270	mg/kg	0,0095			
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,085	mg/kg	0,030			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	170	mg/kg	59			
<i>Mineral Oils (C10÷40)</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



Continuation of
Test Report n°:

2158081-006

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 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 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-006

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	3,50	mg/kg	0,70			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,240	mg/kg	0,060			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	13,0	mg/kg	3,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	9,0	mg/kg	1,8			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	9,0	mg/kg	1,6			
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	22,0	mg/kg	6,0			
<i>Zinc</i>							
ANIONI							
ANIONS							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0230	mg/kg	0,0081			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0190	mg/kg	0,0067			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0160	mg/kg	0,0056			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0180	mg/kg	0,0063			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,35	mg/kg	0,12			
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,035	mg/kg	0,012			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	41	mg/kg	14			
<i>Mineral Oils (C10÷40)</i>							

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Continuation of
Test Report n°:

2158081-007

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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**Chimica
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- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-007

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	3,10	mg/kg	0,70			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,260	mg/kg	0,070			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	16,0	mg/kg	3,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	24,0	mg/kg	4,0			
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	32,0	mg/kg	9,0			
<i>Zinc</i>							
ANIONI							
ANIONS							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,260	mg/kg	0,091			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,170	mg/kg	0,060			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,093	mg/kg	0,033			
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,062	mg/kg	0,022			
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,050	mg/kg	0,018			
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,180	mg/kg	0,063			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,055	mg/kg	0,019			
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,230	mg/kg	0,081			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0170	mg/kg	0,0060			
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,41	mg/kg	0,14			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	0,190	%	0,030			
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	60	mg/kg	21			
<i>Mineral Oils (C10÷40)</i>							

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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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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 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 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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-008

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	3,50	mg/kg	0,70			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,230	mg/kg	0,060			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	8,0	mg/kg	1,7			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	5,4	mg/kg	1,0			
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	14,0	mg/kg	4,0			
<i>Zinc</i>							
ANIONI							
ANIONS							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0190	mg/kg	0,0067			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0170	mg/kg	0,0060			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0150	mg/kg	0,0053			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,280	mg/kg	0,098			
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,030	mg/kg	0,011			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	37	mg/kg	13			
<i>Mineral Oils (C10÷40)</i>							

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Continuation of
Test Report n°:

2158081-009

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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**Chimica
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- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-009

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	2,90	mg/kg	0,60			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,210	mg/kg	0,060			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	8,0	mg/kg	1,5			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	8,0	mg/kg	1,3			
<i>Lead</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	17,0	mg/kg	5,0			
<i>Zinc</i>							
ANIONI							
ANIONS							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0240	mg/kg	0,0084			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0200	mg/kg	0,0070			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0180	mg/kg	0,0063			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0210	mg/kg	0,0074			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,190	mg/kg	0,067			
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,038	mg/kg	0,013			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	< 1	mg/kg				
<i>Mineral Oils (C10÷40)</i>							

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-010

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
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- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158081-010

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 $\leq$ 2 cfu (colony-forming units) this means the number of microorganisms present in the analyzed volume.
- If the result is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	2,40	mg/kg	0,50			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,2	mg/kg				
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	7,0	mg/kg	1,4			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	2,80	mg/kg	0,60			
<i>Lead</i>							

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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				
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	3,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0150	mg/kg	0,0053			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0160	mg/kg	0,0056			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0100	mg/kg	0,0035			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0140	mg/kg	0,0049			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0220	mg/kg	0,0077			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	0,53	%	0,10			
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	27,4	mg/kg	9,6			
<i>Mineral Oils (C10÷40)</i>							

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Continuation of
Test Report n°:

2158273-001

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

➤ MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
➤ MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
➤ MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
➤ Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
➤ Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-001

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	2,30	mg/kg	0,50			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,2	mg/kg				
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	7,0	mg/kg	1,4			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	3,50	mg/kg	0,70			
<i>Lead</i>							

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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				
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	3,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,036	mg/kg	0,013			
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,034	mg/kg	0,012			
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0180	mg/kg	0,0063			
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0160	mg/kg	0,0056			
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0120	mg/kg	0,0042			
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0260	mg/kg	0,0091			
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,0140	mg/kg	0,0049			
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,036	mg/kg	0,013			
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	0,055	mg/kg	0,019			
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/(PCDF) WHO-TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	0,200	%	0,040			
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	30	mg/kg	10			
<i>Mineral Oils (C10÷40)</i>							

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
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- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-002

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
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➤ MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
➤ Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
➤ Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-002

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	4,60	mg/kg	0,90			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,200	mg/kg	0,060			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	13,0	mg/kg	3,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	13,0	mg/kg	2,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Lead</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	17,0	mg/kg	5,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	104	mg/kg	36			
<i>Mineral Oils (C10÷40)</i>							

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Continuation of
Test Report n°:

2158273-003

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

➤ MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
➤ MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
➤ MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
➤ Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
➤ Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-003

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	4,50	mg/kg	0,90			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,220	mg/kg	0,060			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	13,0	mg/kg	3,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	14,0	mg/kg	3,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Lead</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	17,0	mg/kg	5,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



Continuation of
Test Report n°:

2158273-004

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

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



Continuation of
Test Report n°:

2158273-004

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



Continuation of
Test Report n°:

2158273-004

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	3,30	mg/kg	0,80			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,2	mg/kg				
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	13,0	mg/kg	4,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	71	mg/kg	25			
<i>Mineral Oils (C10÷40)</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

➤ MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
➤ MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
➤ MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
➤ Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
➤ Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartimenti Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-005

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoethyl-tin, tetraethyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	3,10	mg/kg	0,70			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,2	mg/kg				
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Lead</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	13,0	mg/kg	4,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	59	mg/kg	21			
<i>Mineral Oils (C10÷40)</i>							

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-006

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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°:

2158273-006

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	2,70	mg/kg	0,60			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,300	mg/kg	0,080			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	8,0	mg/kg	1,9			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	8,0	mg/kg	1,5			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	2,10	mg/kg	0,50			
<i>Lead</i>							

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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				
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	11,0	mg/kg	3,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



Continuation of
Test Report n°:

2158273-007

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

Document with advanced digital signature in accordance with current legislation.

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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

- MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
- MASAF Elenco dei laboratori che soddisfano i requisiti per Az Fertilizzanti previsti dal D.L. 29-04-2010, n.75
- MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
- Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
- Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-20
- Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-007

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

Document with advanced digital signature in accordance with current legislation.

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➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-007

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	3,20	mg/kg	0,70			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,340	mg/kg	0,090			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	9,0	mg/kg	1,8			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	2,70	mg/kg	0,60			
<i>Lead</i>							

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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				
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	14,0	mg/kg	4,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	37	mg/kg	13			
<i>Mineral Oils (C10÷40)</i>							

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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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➤ Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
➤ Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-008

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

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

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	3,40	mg/kg	0,70			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,250	mg/kg	0,060			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	8,0	mg/kg	1,9			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	10,0	mg/kg	2,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Lead</i>							

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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				
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	11,0	mg/kg	3,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	< 1	mg/kg				
<i>Mineral Oils (C10÷40)</i>							

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Continuation of
Test Report n°:

2158273-009

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

➤ MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
➤ MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
➤ MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
➤ Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
➤ Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-009

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	7,4	mg/kg	1,4			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,57	mg/kg	0,15			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	17,0	mg/kg	4,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	18,0	mg/kg	4,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	23,0	mg/kg	6,0			
<i>Zinc</i>							
ANIONI							
ANIONS							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
POLYCYCLIC AROMATIC HYDROCARBONS							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	24,1	mg/kg	8,4			
<i>Mineral Oils (C10÷40)</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



Continuation of
Test Report n°:

2158273-010

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



Continuation of
Test Report n°:

2158273-010

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	6,5	mg/kg	1,3			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,37	mg/kg	0,10			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	18,0	mg/kg	4,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	21,0	mg/kg	4,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Lead</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	26,0	mg/kg	7,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	< 1	mg/kg				
<i>Mineral Oils (C10÷40)</i>							

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

➤ MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
➤ MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
➤ MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
➤ Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
➤ Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-011

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132

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The symbol * indicates that the test is not accredited by ACCREDIA as well as the sampling method associated with it.



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							
<i>CHEMICAL PARAMETERS</i>							
METALLI							
<i>METALS</i>							
Arsenico	UNI EN 13657:2004 + UNI EN 16170:2016	5,8	mg/kg	1,2			
<i>Arsenic</i>							
Cadmio	UNI EN 13657:2004 + UNI EN 16170:2016	0,340	mg/kg	0,090			
<i>Cadmium</i>							
Cromo	UNI EN 13657:2004 + UNI EN 16170:2016	16,0	mg/kg	4,0			
<i>Chromium</i>							
Mercurio	UNI EN 13657:2004 + UNI EN 16170:2016	< 0,1	mg/kg				
<i>Mercury</i>							
Nichel	UNI EN 13657:2004 + UNI EN 16170:2016	20,0	mg/kg	4,0			
<i>Nickel</i>							
Piombo	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Lead</i>							

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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			
<i>Copper</i>							
Stagno	UNI EN 13657:2004 + UNI EN 16170:2016	< 1	mg/kg				
<i>Tin</i>							
Zinco	UNI EN 13657:2004 + UNI EN 16170:2016	23,0	mg/kg	6,0			
<i>Zinc</i>							
ANIONI							
<i>ANIONS</i>							
Cianuri	MU 2251:08 App C	< 0,1	mg/kg				
<i>Cyanides</i>							
IDROCARBURI POLICICLICI AROMATICI							
<i>POLYCYCLIC AROMATIC HYDROCARBONS</i>							
Benzo(a)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) anthracene</i>							
Benzo(a)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (a) pyrene</i>							
Benzo(b)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (b) fluoranthene</i>							
Benzo(k)fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo (k) fluoranthene</i>							
Benzo(g,h,i)perilene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Benzo(g,h,i)perylene</i>							
Crisene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Chrysene</i>							
Dibenzo(a,e)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,e) pyrene</i>							

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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				
<i>Dibenzo (a,l) pyrene</i>							
Dibenzo(a,i)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo (a,i) pyrene</i>							
Dibenzo(a,h)pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)pyrene</i>							
Dibenzo(a,h)antracene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Dibenzo(a,h)anthracene</i>							
Indenopirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Indeno (1,2,3-c,d) pyrene</i>							
Pirene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Pyrene</i>							
Naftalene (C10)	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Naphthalene</i>							
Fluorantene	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,01	mg/kg				
<i>Fluoranthene</i>							
COMPOSTI ORGANICI AROMATICI							
<i>AROMATIC ORGANIC COMPOUNDS</i>							
Benzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Benzene</i>							
Toluene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Toluene</i>							
Etilbenzene	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Ethylbenzene</i>							
Xileni	EPA 5035A 2002 + EPA 8260D 2018	< 0,01	mg/kg				
<i>Xylenes</i>							

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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							
<i>DIOXINS AND FURANS</i>							
Sommatoria (PCDD) / (PCDF) WHO-TEQ	EPA 8280 B 2007 + UNEP/POPS/COP.3/INF/27 11/04/2007 WHO 2005 TEQ	< 0,00001	mg/kg				
<i>Summation (PCDD)/ (PCDF) WHO- TEQ</i>							
PCB con GC-QQQ							
<i>PCB con GC-QQQ</i>							
PCB28	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB28</i>							
PCB52	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB52</i>							
PCB101	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB101</i>							
PCB118	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB118</i>							
PCB138	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB138</i>							
PCB153	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB153</i>							
PCB180	EPA 3541 1994 + EPA 3630C 1996 + EPA 8270E 2018	< 0,001	mg/kg				
<i>PCB180</i>							
ALTRE SOSTANZE							
<i>OTHER SUBSTANCES</i>							
TOC	UNI EN 13137:2002	< 0,01	%				
<i>TOC</i>							
Oli Minerali (C10÷40)	UNI EN 14039:2005	< 1	mg/kg				
<i>Mineral Oils (C10÷40)</i>							

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Continuation of
Test Report n°:

2158273-012

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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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**Chimica
Applicata
Depurazione
Acque s.n.c.**
di Filippo Giglio & C.

➤ MASAF Elenco Laboratori designati al rilascio di Certificati Analisi Settore Oleicolo
➤ MASAF Elenco dei laboratori che soddisfano i requisiti per Ar Fertilizzanti previsti dal D.L. 29-04-2010, n.75
➤ MASAF D.M. n.2592 del 12-03-2014 – Elenco Laboratori che eseguono analisi per controlli in Agricoltura Biologica
➤ Ministero della Salute Elenco Regione Sicilia Laboratori qualificati analisi amianto ai sensi del DM 14/05/96
➤ Regione Sicilia - Elenco laboratori che eseguono analisi Autocontrollo Alimentare Allegato A al D.D.G. n.434/2017 del 9-3-2017
➤ Regione Sicilia Elenco Tecnici Competenti in Acustica – Dipartim. Ambiente – D.Lgs n. 42 del 17-02-2017



LAB N° 0439 L

Continuation of
Test Report n°:

2158273-012

Tests	Method	Result	U.O.M.	Uncertainty	Recovery [%]	Lim. Min.	Lim. Max.
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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 is 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-Dichloroethylene" we mean the "Sum of cis-1,2- Dichloroethylene and trans-1,2- Dichloroethylene".

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

For Chlordane 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, monoctyl-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

Dott. Giuseppe Rocca

Chimico
Ordine Interprovinciale dei Chimici della Sicilia
Sigillo N.294

Laboratory Director

Dott.ssa Margherita Augello

Ordine Nazionale dei Biologi
Albo professionale N.036132

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APPENDIX II: WORKINGS

Replicate A1M1					
Metal			Compound		
Chemical	RAM	onc (mg/L)	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	1.14925605
Nickel	59	23	Nickel Monoxide	75	0.002923729
Lead	207	6.7	Tetraethyl lead (Lead alkyls)	323	0.001045459
Copper	65	17	Copper (II) 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	0.001	Benzo [g,h,i] perylene	276	0.000001
Indeno (1,2,3-cd)	290	0.01	Indeno (1,2,3-cd) pyrene	290	0.000001
Fluoranthene	202	0.016	Fluoranthene	202	0.000016
Total PCB	1	0.001	Total PCB content	1	0.0000001
Total organ	1	0.01	Total organic carbon	1	0.000001
Tin	119	1	Tributyltin oxide	596	0.000050084

[illegible]

[illegible]

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% Sum of H318 > 1% 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% STOT SE 2: Sum of H371 > 10% STOT SE 3: Sum of H335 > 20% STOT SE 1: Sum of H372 > 1% STOT SE 2: Sum of H373 > 10% 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% 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% Repr. 2: Sum of H361 > 3%		NH	NH	NH	NH		
HP11	Mutagenic	Muta 1: Sum of H340 > 0.1% 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	Conc (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)pyrene	252	0.019	Benzo(a)pyrene	252	0.0000019
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	0.035	Fluoranthene	202	0.0000035
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 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	Conc (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)pyrene	252	0.02	Benzo(a)pyrene	252	0.000002
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	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% Sum of H318 > 1% 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% STOT SE 2: Sum of H371 > 10% STOT SE 3: Sum of H335 > 20% STOT SE 1: Sum of H372 > 1% STOT SE 2: Sum of H373 > 10% 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% 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% Repr. 2: Sum of H361 > 3%		NH	NH	NH	NH	NH	NH
HP11	Mutagenic	Muta 1: Sum of H340 > 0.1% 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)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 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)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

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% Sum of H318 > 1% 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% STOT SE 2: Sum of H371 > 10% STOT SE 3: Sum of H335 > 20% STOT SE 1: Sum of H372 > 1% STOT SE 2: Sum of H373 > 10% 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% 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% Repr. 2: Sum of H361 > 3%		NH	NH	NH	NH	NH	NH
HP11	Mutagenic	Muta 1: Sum of H340 > 0.1% 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	Conc (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)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 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	Conc (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)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

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% Sum of H318 > 1% 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% STOT SE 2: Sum of H371 > 10% STOT SE 3: Sum of H335 > 20% STOT SE 1: Sum of H372 > 1% STOT SE 2: Sum of H373 > 10% 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% 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% Repr. 2: Sum of H361 > 3%		NH	NH	NH	NH	NH	NH
HP11	Mutagenic	Muta 1: Sum of H340 > 0.1% 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