

Compost Monitoring Plan for Pitkalija Composter

Sampling strategy shall be as per BS EN 12579:2013. The following is a list of parameters to be tested and the standards to be used.

Parameter	Frequency	Test Method	Unit	Limit value
Physical Properties / General tests	Quarterly analysis of all parameters mentioned			
Dry matter		EN 13040: 2007	% by mass	At least 20% fresh weight or more dry matter.
Organic carbon (C org)		EN 13039: 2011 Or ISO 10694 and EN 15936	% by mass	Organic carbon content shall be at least 7.5% by mass.
Impurities a. Macroscopic impurities above 2 mm in any of the following forms: glass, metal, or plastics. b. Sum of macroscopic impurities		CEN/TS 16202	g/kg dry matter	a. Max. 3 g/kg dry matter b. Max 5 g/kg dry matter
pH		EN 13037: 2011		
Electrical Conductivity		EN 13038: 2011	mS/m	
PAH ₁₆ Sum of naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene,		ISO 13859:2014	mg/kg dry matter	No more than 6 mg/kg

indeno[1,2,3-cd]pyrene, dibenzo[a,h]anthracene and benzo[ghi]perylene				
Microbiological testing				
Salmonella	ISO 6579-1:2017 or CEN/TC308 (CEN/TR 15215-1:2006, CEN/TR 15215- 2:2006, CEN/TR 15215-3:2006)	25g fresh mass	See Table below	
Escherichia coli (E. coli)	ISO 16649-1:2018 OR CEN/TR 16193:2013 ISO 16649-2: 2001	CFU/g	See Table below	
Hazardous components				
Mercury (Hg)	ISO 16772: 2004	mg/kg dry matter	1 mg/kg	
Cadmium (Cd)	EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter	2 mg/kg	
Hexavalent Chromium [Cr(VI)]	EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter	2 mg/kg	
Lead (Pb)	EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter	120 mg/kg	
Nickel (Ni)	EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter	50 mg/kg	
Inorganic Arsenic (As)	EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter	40 mg/kg	
Plant nutrients				
Organic nitrogen (N org)	CEN/TS 17729:2022	% by mass		
Nitrogen (N)	CEN/TS 17729:2022	% by mass		

Organic carbon (C org)/total nitrogen (N)		EN 15936 & CEN/TS 17729:2022	-	
Copper (Cu)		EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter	Max. 300 mg/kg
Zinc (Zn)		BS EN 13650: 2001 (soluble in aqua regia)	mg/kg dry matter	Max. 800 mg/kg
Stability criteria (one to be chosen)				
Oxygen uptake rate (OUR)		EN 16087-1	mmol O ₂ /kg organic matter/h	Max. 25 mmol O ₂ /kg
or				
Self-heating factor		EN 16087-2	Rottegrad	Min. III
Other				
Phosphorus pentoxide (P ₂ O ₅)		CEN/TS 17729:2022	% by mass	-
Potassium oxide (K ₂ O)		CEN/TS 17729:2022	% by mass	-

Pathogens in an organic fertiliser must not exceed the limits set out in the following table:

Micro-organisms to be tested	Sampling plans			Limit
	n	c	m	M
Salmonella spp.	5	0	0	Absence in 25 g or 25 ml
Escherichia coli	5	5	0	1000 in 1 g or 1 ml

Where:

n = number of samples to be tested,

c = number of samples where the number of bacteria expressed in colony forming units (CFU) is between m and M,

m = threshold value for the number of bacteria expressed in CFU that is considered satisfactory,

M = maximum value of the number of bacteria expressed in CFU.¹

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019R1009>