

Compost Quality

The quality of the compost will vary greatly depending on what is being composted; food, green waste, sewage sludge, etc. The following Table provides some indicative values based on samples of compost taken at various HotRot composting facilities worldwide.

It can generally be expected that compost produced by the HotRot system will meet international standards for pathogen elimination and maturity. Where compost is produced from source separated garden and kitchen waste levels of trace elements and contaminants should also meet international standards. Where compost is produced from biosolids from sewage treatment heavy metals may be elevated and testing of product is recommended.

Indicative Analytical Results of Compost

Analysis	Units	Typical results (average)	Standards Limits
Pathogens			
Salmonella	MPN/25g	Not detected	Not detected
Total coliforms	MPN/g	<100 (25)	<200
Faecal coliforms	MPN/g	<50 (9)	<200
Maturity			
Dewar flask	0C	<5.0	<8.0
CO ₂ evolution	mgCO ₂ /gOM/d	<4.0	<16.0
Weeds		0	0
Plant germination	%	95	>80
Plant top growth	%	95-105	>80
Chemical Analysis			
pH		7.0-8.5 (7.8)	5.0-8.5
Conductivity	mS/cm	<50 (38)	
Total carbon (TOC)	%	49.5 (45-55)	
Total nitrogen (TKN)	%	2.1 (1.5-3.0)	
Carbon:nitrogen ratio	:1	23.5 (18-30)	≤25
Total phosphorus	mg/kg dry	2,700	
Total potassium	mg/kg dry	3,825	
Moisture content	%	25-50 (35)	
Bulk density	kg/m ³	250-350	

Indicative Analytical Results of Compost cont....

Analysis	Units	Typical results (average)	Standards Limits
Trace elements			
Cadmium	mg/kg dry	0-0.45 (0.17)	0.7
Chromium	mg/kg dry	12-26 (19.4)	100
Copper	mg/kg dry	12-35 (20.3)	100
Nickel	mg/kg dry	4.0-7.0 (6.0)	50
Lead	mg/kg dry	5.0-15.0 (9.7)	200
Zinc	mg/kg dry	60-130 (85)	400
Iron	mg/kg dry	14-22,000 (17,600)	3-30,000
Sodium	mg/kg dry	1-4,800 (3,500)	1-10,000
Boron	mg/kg dry	45-60 (53)	
Manganese	mg/kg dry	250-350 (300)	
Molybdenum	mg/kg dry	1.5-2.5 (1.8)	
Mercury	mg/kg dry	0.15-0.18 (0.16)	1.0