



Analytical Services Ltd

Unit 9 Airside, Airport Business Park, Killowen , Waterford.

CHEMICAL ANALYSIS REPORT

Test Report Number: 20-01-16007

Wellman International Limited
Mullagh
Kells
Co.Meath.
Att : Mr. Danny Lynch.

Date of Sample:	28-January-2020	Test Report Number:	20-01-16007
Date of Receipt:	30-January-2020	Sample Type:	Sludge Sample
Date of Report:	15-February-2020	Sample Reference:	Biotower Sludge Sample As Dated.
Laboratory Ref. Number:	20-18207	Sample Presentation: Volume of sample :	1 Litre Plastic Sample Bottle.

Abbreviations :

% Vol : percentage volume.

% wt: percentage weight.

mg/L : milligrams per litre (ppm).

ppm : parts per million or mg per litre.

mg/g: milligrams per gram.

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Analytical Results

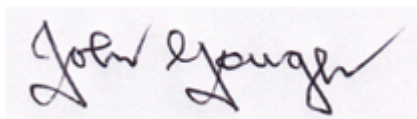
Test/Parameter	Method	Units	Reported Levels
Cadmium as Cd.	APHA Ref. 3500-Cd.C	mg/kg.	0.616
Chromium as Cr.	APHA Ref. 3500-Cr.C	mg/kg.	1.765
Mercury as Hg.	APHA Ref. 3500-Hg.B	mg/kg.	0.008
Lead as Pb.	APHA Ref. 3500-Pb.C	mg/kg.	1.178
Zinc as Zn.	APHA Ref. 3500-Zn.C	mg/kg.	5.550
Nickel as Ni.	APHA Ref. 3500-Ni.C	mg/kg.	0.468
Copper as Cu.	APHA Ref. 3500-Cu.C	mg/kg.	1.245
Selenium as Se.	APHA Ref. 3500-Se.I	mg/kg.	0.600
Molybdenum as Mo.	APHA Ref. 3500-Mo.C	mg/kg.	0.135
Aluminium as Al.	APHA Ref. 3500-Al.C	mg/kg.	3.650
Boron as B.	APHA Ref. 3500-B.C	mg/kg.	0.045
Iron as Fe.	APHA Ref. 3500-Fe.C	mg/kg.	3.998
Manganese as Mn.	APHA Ref. 3500-Mn.C	mg/kg.	1.460
Barium as Ba.	APHA Ref. 3500-Ba.C	mg/kg.	0.625
Arsenic as As.	APHA Ref. 3500-As.C	mg/kg.	0.286
Antimony as Sb.	APHA Ref. 3500-Sb.C	mg/kg.	0.091
Cobalt as Co.	APHA Ref. 3500-Co.C	mg/kg.	0.369
Silver as Ag.	APHA Ref. 3500-Ag.C	mg/kg.	< 0.0001
Beryllium as Be.	APHA Ref. 3500-Be.C	mg/kg.	< 0.0006
Tin as Sn.	APHA Ref. 3500-Sn.C	mg/kg.	< 0.002

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Analytical Results

Test/Parameter	Method	Units	Reported Levels
Organic Content	APHA Ref. 6210.D	mg/kg.	80.245
Water Content	EN 12880 (Gravimetric)	% mass.	17.235
Phthalates Content	GC-MS Internal	mg/kg.	1.660
Titanium dioxide	EPA 6010B	µg/kg	0.006

J.W. GOUGH



Technical Signatory.

Dated : 15th. February 2020