

**SWEP** PTY. LTD.

ABN 26 005 031 569

**ANALYTICAL
LABORATORIES**Tel: (03) 9701 6007
Fax: (03) 9701 5712**REPORT ON SAMPLE OF GYPSUM**

FILE NO : 2109163529

DATE ISSUED : 20/09/2021

TOWNSVILLE LIME & GYPSUM
PO BOX 1590CLIENT ID : TLG001
PHONE : 0427 008 856

INNISFAIL, QLD 4860

REFERENCE :

REFERENCE ID :

SAMPLE ID : GYPSUM - WINTON

PHONE :

ANALYSIS REQUIRED : Full & Heavy Metals

DATE RECEIVED : 14/09/2021

ITEMS	ABBREVIATION	UNIT	RESULTS
Results of analysis on sample on dry weight basis:			
TOTAL CALCIUM	Ca	%	19.3
TOTAL MAGNESIUM	Mg	%	0.151
TOTAL SODIUM	Na	%	0.0423
TOTAL POTASSIUM	K	%	0.133
TOTAL NITROGEN	N	ppm	646
TOTAL PHOSPHORUS	P	ppm	13.1
TOTAL SULPHUR	S	%	14.6
TOTAL COPPER	Cu	ppm	3.25
TOTAL ZINC	Zn	ppm	2.23
TOTAL IRON	Fe	ppm	2240
TOTAL MANGANESE	Mn	ppm	51
TOTAL COBALT	Co	ppm	0.846
TOTAL MOLYBDENUM	Mo	ppm	Nil
CALCIUM SULPHATE	CaSO ₄ .2H ₂ O	%	78.5
pH	(1:5 Water)		7.96
Electrical Conductivity		µS/cm	2010
TOTAL BORON	B	ppm	9.7
MOISTURE CONTENT	MC	%	3.63
TOTAL MERCURY	Hg	ppm	0.017
TOTAL LEAD	Pb	ppm	0.489
TOTAL CADMIUM	Cd	ppm	0.00318
TOTAL ARSENIC	As	ppm	0.307
TOTAL NICKEL	Ni	ppm	1.45
TOTAL CHROMIUM	Cr	ppm	5.61

Gypsum described as Grade 1 : Gypsum must contain a minimum of 15.0% sulphur (S) and a minimum of 19.0% Calcium (Ca).

Gypsum described as Grade 2 : Gypsum must contain a minimum of 12.5% sulphur (S) and a minimum of 15.5% Calcium (Ca).

Gypsum described as Grade 3 : Gypsum must contain a minimum of 10.0% sulphur (S) and a minimum of 12.5% Calcium (Ca).

This sample complies with the standard for Gypsum under the 1995 Victorian
Agricultural and Veterinary Chemicals (Fertilisers) Regulation (Statutory Rule No 25/1995)

ANALYTICAL METHODS

Items	Methods
TOTAL CALCIUM	HCl Evaporation, ICPAES
TOTAL MAGNESIUM	HCl Evaporation, ICPAES
TOTAL SODIUM	HCl Evaporation, ICPAES
TOTAL POTASSIUM	HCl Evaporation, ICPAES
TOTAL NITROGEN	Dumas method, LECO
TOTAL PHOSPHORUS	HCl Evaporation, ICPAES
TOTAL SULPHUR	HCl Evaporation, ICPAES
TOTAL COPPER	HCl Evaporation, ICPAES
TOTAL ZINC	HCl Evaporation, ICPAES
TOTAL IRON	HCl Evaporation, ICPAES
TOTAL MANGANESE	HCl Evaporation, ICPAES
TOTAL COBALT	HCl Evaporation, ICPAES
TOTAL MOLYBDENUM	HCl Evaporation, ICPAES
CALCIUM SULPHATE	Calculated from Total Sulphur
pH	Method 4A1, water suspension*
Electrical Conductivity	Method 3A1, water extract*
TOTAL BORON	HCl Evaporation, ICPAES
MOISTURE CONTENT	Gravimetric method
TOTAL MERCURY	Aqua Regia Microwave Digestion, ICPAES
TOTAL LEAD	HCl Evaporation, ICPAES
TOTAL CADMIUM	HCl Evaporation, ICPAES

*Rayment, G.E. & Lyons, D.J. (2011). Soil Chemical Methods - Australasia. CSIRO Publishing, 150 Oxford Street, Collingwood Vic 3066, Australia.