

RESULTS OF XRAY FLUORESCENCE ANALYSIS

3 lime samples supplied by Aglime Fertilisers on the 28 February, 2019 - Lab Job No. H8995.

Analysis requested by Cheryl Bell. Your Project: Aglime

(709 Marulan South Road, Marulan NSW)

SAMPLE ID	EAL Lab Code	Concentration (%)																					
		MgCO ₃	Al ₂ O ₃	SiO ₂	SO ₂	Cl	K ₂ O	CaCO ₃	TiO ₂	V ₂ O ₅	MnO	Fe ₂ O ₃	Rb ₂ O	SrO	Y ₂ O ₃	ZrO ₂	SnO ₂	TeO ₂	HgO	CaO	Ca	MgO	Fe
Dry Silo	H8995/1	0.95	0.60	1.40	..	< 0.01	0.12	96.40	0.04	< 0.01	0.03	0.39	< 0.01	0.02	< 0.01	< 0.01	0.02	< 0.01	< 0.01	54.01	38.60	0.45	0.27
Damp Stockpile	H8995/2	1.28	1.35	3.11	0.02	..	0.23	93.38	0.06	< 0.01	0.03	0.50	< 0.01	0.02	< 0.01	< 0.01	0.02	< 0.01	..	52.32	37.39	0.61	0.35
Grit Silo	H8995/3	0.86	0.43	1.12	0.09	97.13	0.02	..	0.02	0.27	< 0.01	0.02	< 0.01	< 0.01	0.02	< 0.01	..	54.42	38.89	0.41	0.19

NOTE:

- The sample was bound with wax (9:1) and pressed as a pellet for 30 seconds at 20 tonnes pressure.
- Intensities were measured on a PANalytical Epsilon 3 X-Ray Fluorescence (XRF) Analyser for all elements with atomic weight of Fluorine and above.
- Concentrations were calculated against Omnian standards in Panalytical Epsilon 3 Software; as no matrix corrections were applied, the data should be considered semi-quantitative.
- Based on client supplied information that the sample was aglime, Ca content was calculated as CaCO₃ and Mg as MgCO₃ within the Omnian software.
- Calculations of CaCO₃ and MgCO₃ were based on the assumption that all Ca and all Mg was present as carbonates.
- Concentrations for CaO and Ca were calculated from the CaCO₃ reported by the XRF; Fe was calculated from Fe₂O₃ and MgO was calculated from MgCO₃.
- .. is reported when the element was not apparent in the spectra.
- All services undertaken by EAL are covered by the EAL Laboratory Services Terms and Conditions.

RESULTS OF AGLIME ANALYSIS

3 lime samples supplied by Aglime Fertilisers on the 28 February, 2019 - Lab Job No. H8995.

Analysis requested by Cheryl Bell. Your Project: Aglime

(709 Marulan South Road, Marulan NSW)

Sample ID	EAL Lab Code	105 °C Moisture Content	Acid Neutralising Capacity
		(%)	(ANC _{BT}) (% CaCO ₃ equiv.)
Dry Silo	H8995/1	0.1	94.9
Damp Stockpile	H8995/2	0.2	91.3
Grit Silo	H8995/3	0.1	95.4

NOTE:

- All analysis is Dry Weight (DW) - samples dried and ground immediately upon arrival (unless supplied dried and ground)
- Moisture content is expressed as moisture as a per cent of the wet mass
- Analytical procedures are sourced from Sullivan L, Ward N, Toppler N and Lancaster G. 2018. National acid sulfate soils guidance: national acid sulfate soils identification and laboratory methods manual, Department of Agriculture and Water Resources, Canberra, ACT. CC BY 4.0.
- Results refer to samples as received at the laboratory.
- Analysis conducted between sample arrival date and reporting date.
- ** NATA accreditation does not cover the performance of this service.
- .. Denotes not requested.
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checked:
Graham Lancaster
Laboratory Manager

GRAIN SIZE ANALYSIS (laser particle size techniques)

3 lime samples supplied by Aglime Fertilisers on the 28 February, 2019 - Lab Job No. H8995.

Analysis requested by Cheryl Bell. Your Project: Aglime

(709 Marulan South Road, Marulan NSW)

Sample ID	Lab Code	Particle Size of < 2 mm fraction (%)							
		> 250 µm	150–250 µm	150–75 µm	< 75 µm	30–75 µm	20–30 µm	11–20 µm	< 11 µm
Dry Silo	H8995/1	0.7	5.2	14.7	79.5	23.5	11.2	16.1	28.6
Damp Stockpile	H8995/2	0.0	1.1	8.4	90.5	30.1	16.4	19.7	24.4

Sample ID	Lab Code	Particle Size of whole sample (%)									
		> 4000 µm	2360–4000 µm	2000–2360 µm	> 2000 µm	1000–2000 µm	500–1000 µm	250–500 µm	125–250 µm	63–125 µm	< 63 µm
Grit Silo	H8995/3	0.00	26.46	16.51	42.97	52.08	4.42	0.35	0.14	0.03	0.00

NOTE:

1. Laser Particle Size using a Mastersizer Hydro 2000MU analyser for samples H3278/1-3

Laser Method: Sample dispersed in methylated spirits.

2. Average results reported of at least 3 measurements.

3. Laser diffraction particle size analysis is based on a spherical equivalent volume. Results are expressed as volume per cent.

4. Dry sieving undertaken for samples H3278/4 as the material was too coarse for analysis by laser diffraction particle sizing.

5. Dry sieving results are expressed as B-axis values.

6. All services undertaken by EAL are covered by the EAL Laboratory Services Terms and Conditions (refer scu.edu.au/eal or on request).

