



REPORT ON SAMPLE OF LIME

FILE NO : 1504111245

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MIRRIWINNI LIME
PO BOX 2
MIRRIWINNI, QLD 4871

CLIENT ID : MIR010
PHONE : 07 4067 6133

SAMPLE ID : CA LDQ-1

DATE RECEIVED : 29/04/2015

ANALYSIS REQUIRED : Lime quality (LDQ-1)

ITEMS	ABBREVIATION	UNIT	RESULTS
Results of analysis on sample on dry weight basis:			
pH (1:5 Water)			9.2
Electrical Conductivity	EC	µS/cm	153
TOTAL CALCIUM	Ca	%	39.8
TOTAL MAGNESIUM	Mg	%	0.205
TOTAL SODIUM	Na	%	0.00347
CALCIUM CARBONATE	CaCO ₃	%	99.5
	(Calculated from Total Calcium)		
MAGNESIUM CARBONATE	MgCO ₃	%	0.72
	(Calculated from Total Magnesium)		
MOISTURE CONTENT	MC	%	16
MATERIAL > 2mm		%	0
MATERIAL 1.00 - 2.00 mm		%	0
MATERIAL 0.85 - 1.00 mm		%	32
MATERIAL 0.30 - 0.85 mm		%	7
MATERIAL 0.075 - 0.30 mm		%	34
MATERIAL < 0.075mm		%	27
NEUTRALISING VALUE	NV	%	100.35
EFFECTIVE NEUTRALISING VALUE	ENV	%	68.64

Notes on Neutralising Value

Neutralising Value is a measure of the amount of acidity a material can neutralise, or in the case of lime, its total liming value. An approximation of Neutralising Value can be made by $CaCO_3 + (2.5 \times MgO)$.

Effective Neutralising Value is a calculated adjustment of the Neutralising Value, using the fineness of the lime. Lime retained on an 850 µm sieve (the coarser fraction) is estimated to be only 10% effective (fully utilised in the short term). Lime in the 300-850 µm sieve range (medium sized fraction) is estimated to be only 60% effective, while lime passing the 300 µm sieve (finer fraction) is estimated to be 100% effective.

Where a lime has a low Effective Neutralising Value (due to a high proportion of coarse fraction), further grinding should increase its effectiveness to change the pH.

ANALYTICAL METHODS: LIME & DOLOMITE

Items	Abbreviation	Methods
TOTAL CALCIUM	Ca	HCl Evaporation, ICPAES
TOTAL MAGNESIUM	Mg	HCl Evaporation, ICPAES
TOTAL SODIUM	Na	HCl Evaporation, ICPAES
TOTAL POTASSIUM	K	HCl Evaporation, ICPAES
TOTAL NITROGEN	N	Dumas method, LECO
TOTAL PHOSPHORUS	P	HCl Evaporation, ICPAES
TOTAL IRON	Fe	HCl Evaporation, ICPAES
TOTAL MANGANESE	Mn	HCl Evaporation, ICPAES
TOTAL ZINC	Zn	HCl Evaporation, ICPAES
TOTAL COPPER	Cu	HCl Evaporation, ICPAES
TOTAL COBALT	Co	HCl Evaporation, ICPAES
TOTAL BORON	B	HCl Evaporation, ICPAES
TOTAL SULPHUR	S	HCl Evaporation, ICPAES
TOTAL MOLYBDENUM	Mo	HCl Evaporation, ICPAES
CALCIUM CARBONATE	CaCO ₃	Calculated from Total Calcium
MAGNESIUM CARBONATE	MgCO ₃	Calculated from Total Magnesium
Electrical Conductivity	µS/cm	Method 3A1, water extract*
pH	(1:5 Water)	Method 4A1, water suspension*
MOISTURE CONTENT		Gravimetric method

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