

**Client:** Lime WA  
**Client address:** Not Supplied  
**Job number:** 21\_1945  
**Lab ID:** 21\_1945\_05  
**Client ID:** LWA22\_05  
**Analysis :** Semi-quantitative XRD analysis  
**Revision number:** 0  
**Comments:**

**Date received:** 07/12/2021  
**Date analysed:** 15/12/2021  
**Date reported:** 15/12/2021

**LIME WA NOTE :** WATHEROO DOLOMITIC LIME  
 SILICA TEST RESULT 11.3%  
 EX AGRIFOOD MARCH 2020

**Sample preparation**

The sample was supplied by the client to Microanalysis Australia on 07/12/2021 for the above mentioned analyses. A representative sub-sample was removed and dried at 45 degrees celcius before being lightly ground such that 90% was passing 20 µm. Grinding to this size helps eliminate preferred orientation.

**Analysis**

Only crystalline material present in the sample will give peaks in the XRD scan. Amorphous (non-crystalline) material will add to the background. The search match software used was Eva 4.3. An up-to-date ICDD card set was used. The X-ray source was cobalt radiation.

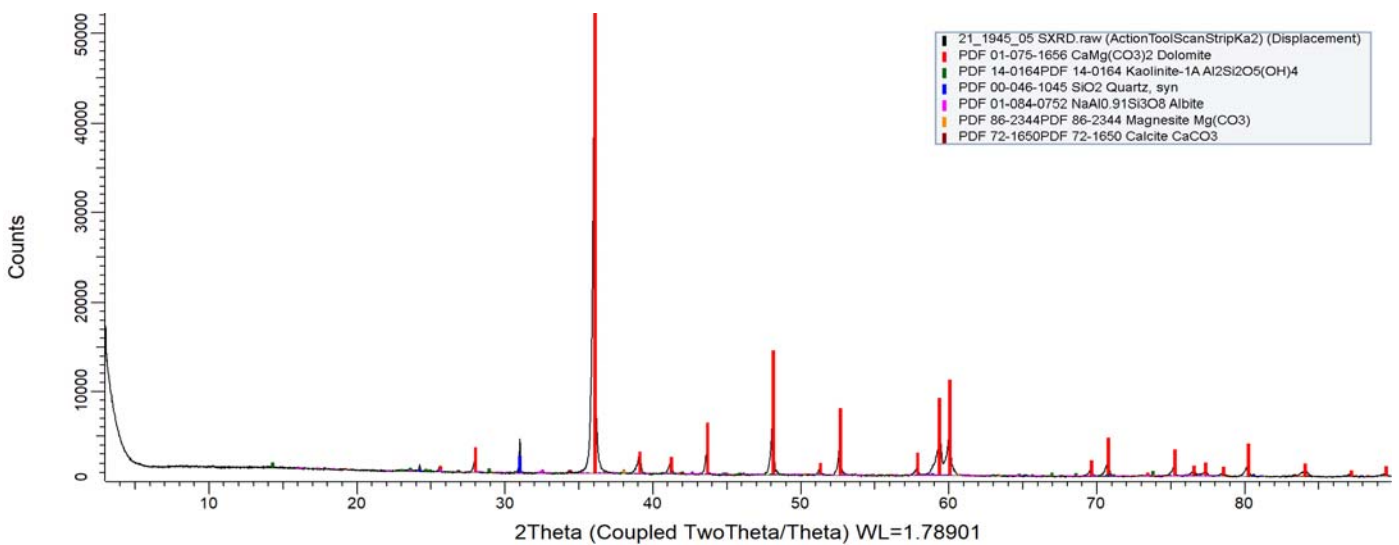
No standards were used in the quantification process. The concentrations were calculated using the normalized reference intensity ratio method where the intensity of the 100% peak divided by the published I/Ic value for each mineral phase is summed and the relative percentages of each phase calculated based on the relative contribution to the sum. This method allows for slight attention to be paid to preferred orientation but is limited in considering other factors including but not limited to; variable crystallinity, alteration, fluorescence, substitution and lattice strain.

**Summary**

The phases are listed in order of interpreted concentration:

Crystalline mineral phase	Concentration (%)	ICDD match probability
Dolomite (CaMg(CO3)2)	92	High
Kaolinite-1A (Al2Si2O5(OH)4)	3	Medium
Quartz, syn (SiO2)	2	High
Albite (NaAl0.91Si3O8)	2	Low
Magnesite (Mg(CO3))	1	Low
Calcite (CaCO3)	1	Low

The ICDD match probability is reported as an indication as to how well the peak positions and relative intensities for the sample matched those in the published literature (www.icdd.org) for that particular compound.



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