

## SAL East Kilbride Summary of Validation Requirements for Drying and Grinding of Soils for Metals Determinations.

### Objective

To confirm that the drying/grinding process used for sample preparation prior to extraction for soils does not significantly affect the results.

### Procedure

Three soils are to be taken and analysed 'as received' and following the standard preparation process. The soils should be chosen to represent the soil types routinely analysed by the laboratory.

Wet soils should be characterised as per the MCERTs protocol, then sieved through the 2 mm sieve in their wet state. Sufficient sample should be taken to allow analysis of the 2 mm fraction, and then of the dried and ground sample. Circa 100 g should be more than sufficient.

The loss on drying should be determined for the 2mm fraction.

Use the table below to record the type/weights.

SAL Ref.	Type	Tray empty wt.	2 mm initial	2mm final	% Solids
S22473/4	Topsoil	6.07	24.28	21.10	82.5
S22200/3	Sand/Gravel	6.05	24.91	22.87	89.2
S21901/4	Clay	6.06	28.49	25.68	87.5

Samples prepared by :- Paul Geri

Date(s) :- 06/12/05

Extracted by :- Michael McGibbon Date :- 9/12/05

Analysed by :- Michael McGibbon Date :- 13/01/06

Six replicates (dry/wet) should be analysed within the same analytical batch. The sample weight taken for extraction for the wet sample should be 1.0 g.

Paul Geri

December 1<sup>st</sup> 2005