

METHOD STATEMENT



Determinand:

Soil Density for the correction of MAFF results

Matrix:

Sample Types: dried and ground soil samples

Principle of Method:

Density is the mass per unit volume of an object or substance; density of soil is determined by finding the mass of soil that fits into a scoop with a volume of 10ml.

A wooden holder with a scoop in it is first tared on a balance. The scoop is removed and filled with soil, the soil is then levelled off and the scoop is replaced in the holder. The mass of this soil is then taken to calculate the density of the soil.

Sampling and Sample Preparation:

Samples are normally stored in soil pots at room temperature. No preservation is required for density. Soil samples are dried and ground according to method WSC15 prior to analysis. Once dried, soil samples are stable for 3 years (BS ISO 18512: 2007).

Interferences

N/A

Performance of Method:

Performance criteria will vary according to the nature of the sample.

Expression of result:

$$\text{MAFF (mg/l)} = \text{MAFF (mg/kg)} \times \text{Density (g/ml)}$$

$$\text{MAFF (mg/l)} = \text{MAFF (\%)} \times 10,000 \times \text{Density (g/ml)}$$

Limit of Detection, Bias and Uncertainty of measurement:

N/A

References:

The Analysis of Agricultural Materials, Reference Book 427, 2nd Edition. Ministry of Agriculture, Fisheries and Food. HMSO. ISBN 0 11 240352 2. Method 24. Method 65.