

# METHOD STATEMENT



## Determinand:

Determination of total dry solids and total ash solids

## Matrix:

Sample Type: sludges, soils and other solids.

## Principle of Method:

The total solids content is determined gravimetrically by drying at  $105^{\circ}\text{C} \pm 5^{\circ}\text{C}$ . The sample Dry Residue is what remains after drying at  $105^{\circ}\text{C}$ .

The ash solids content of dry residue is also determined gravimetrically. The residue in the dish from the total solids content determination is ignited in a furnace at  $550^{\circ}\text{C} \pm 20^{\circ}\text{C}$ . The sample Ash is what remains after ignition. Ash results are calculated on the DRIED sample, not the as-received sample.

## Sampling and Sample Preparation:

Samples are normally received in sludge or soil pots, or polybags.

Soil and sludge samples are stored at  $3 \pm 2^{\circ}\text{C}$ .

Samples are mixed to obtain as near a homogeneous sample as possible.

Samples are stable for 31 days for total dry solids and 31 days for total ash solids (Wakefield in-house data).

## Interferences

The empirical test will give direct values associated with loss at the required temperature. Errors may be associated with the homogeneity of the sample, but no interferences are known.

## Performance of Method:

### Range of Application:

0.2 - 100% as % dried solids

0.2 - 100% as % ash solids

Minimum reporting limit for both methods: 0.2%

### Recoveries of Compounds

Dry Residue

	Wet Soil (loam)	Sand	Air Dried Soil (clay)	Sludge
Value %	66.58	86.70	75.24	1.87
Total RSD (%)	1.59	0.29	3.43	3.40

Ashed Residue

	Wet Soil (loam)	Sand	Air Dried Soil (clay)	Sludge
Value %	84.40	97.23	92.48	31.07
Total RSD (%)	1.02	0.36	1.03	3.74

## References:

Determination of the Total Solids Content (Dry Residue at  $105^{\circ}\text{C}$ ) and the Loss on Ignition of Dry Residue at  $550^{\circ}\text{C}$  of Sewage and Waterworks Sludges and Related Solids - Part of:- The Conditionability, Filterability, Settleability and Solids Content of Sludges 1984 (A compendium of Methods and Tests) . HMSO Methods for the examination of waters and Associated Materials. ISBN 0 11 751787 9.