

METHOD STATEMENT

**Determinand:**

Total Organic Carbon (TOC) at pH 7.0

Matrix:

Leachates

Principle of Method:

The sample is adjusted to pH 7.0 using a buffer solution prior to analysis. Analysis involves samples being pumped into a reaction vessel where acid is added, and the sample purged to remove inorganic carbon and volatile organics. Sodium persulphate is then added, and the sample heated to oxidise the remaining organic carbon to carbon dioxide. This carbon dioxide is carried in a stream of nitrogen to an infrared detector where its concentration is measured and related back to the original mass of organic carbon within the sample. The buffer used for pH adjustment is also analysed to ensure the TOC does not exceed 3mg/l, hence not adding to the overall TOC.

Sampling and Sample Preparation:

The sample is adjusted to pH 7.0 using a buffer solution prior to analysis. Samples are stable for 7 days (ISO 5667:3) from sampling.

Interferences:

Carbon dioxide, carbonates and bicarbonates must be removed by acidification to pH 3.0 or below and purged with nitrogen. The instrument automatically carries this out.

Performance of Method:

Performance characteristics have not been determined for this method

References:

The Instrumental Determination of Total Organic Carbon and Related Determinands 1995. Methods for the Examination of Waters and Associated Materials. HMSO ISBN 011 752979 6.