



## **Method Summary**

### **Determination of Total, Non-Volatile and Volatile Suspended Solids in Aqueous Samples**

#### **Scope and Range**

This method has accreditation to ISO 17025 for Total suspended solids, Volatile and Non-volatile suspended solids in ground water, surface water, landfill leachate, treated and untreated industrial water, sewage effluents and saline water.

Neutralised suspended solids and Non settleable solids are also ISO17025 accredited when prepped by PM210.

TSS is also accredited to MCERTS for Industrial effluent and treated and untreated sewage effluent.

Detection limit: TSS 2 mg/l for 200ml of sample, VSS 7mg/l for 200ml of sample

Working range: 2 - 2000 mg/l

#### **Principle**

##### **Preparation**

Samples are collected in 1 litre PET bottles and kept in fridge until required. Refer to SOP.5.8.J for holding times. Samples must be thoroughly homogenised before analysis.

#### **Analysis**

A recorded volume of homogenised sample is filtered through a pre-washed and weighed GF/C filter paper. The filter paper is dried in an oven at 105°C for 2 hours and then re-weighed on a 5 figure balance. The total suspended solid content of the sample is calculated from the difference in the two weights.

The filter paper and suspended solids are then placed into a muffle furnace at 500 °C.

This ignites the volatile (organic) matter. The solids remaining on the filter paper are therefore non-volatile (inorganic) matter and are calculated with reference to the original sample volume. The volatile matter is calculated from the TSS - NVS result

A blank and an AQC are performed with every batch.

#### **Interferences**

Very oily samples will be washed with industrial methylated spirits to minimise interferences.

Sample that contain large floating particles (e.g. leaves or twigs) or submerged agglomerates (e.g. stones) of non-homogeneous materials, which are not representative of the sample. These would be removed from the filter and a note placed on the file.