

# Solids, volatile-on-ignition, dissolved, gravimetric

Parameter and Code:

Solids, volatile-on-ignition, dissolved, I-1753-85 (mg/L): 00520

## 1. Application

This method may be used to analyze any natural, treated, or industrial water and other wastewater.

## 2. Summary of method

The residue obtained after determination of dissolved solids (method I-1750) is ignited at 550°C. The loss in weight of residue represents a measure of dissolved volatile solids.

## 3. Interferences

3.1 None of the substances commonly occurring in natural waters interfere with this method.

3.2 Because of the great variability in the nature of the compounds that can be present in the sample, particularly in samples of industrial and other wastes, the determination can be considered only an approximation of the amount of volatile material present. Some of the volatile material may have been released during the determination of dissolved solids. Moreover, ignition at 550°C volatilizes water of hydration from the hydrated salts present.

## 4. Apparatus

4.1 *Muffle furnace, 550°C.*

4.2 For additional items of required apparatus, see solids, dissolved (method I-1750).

## 5. Reagents

None required.

## 6. Procedure

6.1 Determine dissolved solids as directed in method I-1750.

6.2 Place the weighed evaporating dish in a muffle furnace at 550°C; heat for 1 h.

6.3 Remove and cool in a desiccator; weigh and record the weight to the nearest 0.1 mg.

## 7. Calculations

Solids, volatile on ignition, dissolved, mg/L =

$$\frac{1000}{\text{mL sample}} \times (ER - IR)$$

where

*ER* = weight of dissolved solids, milligrams,

*IR* = weight of ignited residue, milligrams.

## 8. Report

Report solids, volatile-on-ignition, dissolved (00520), concentrations as follows: less than 1,000 mg/L, whole numbers; 1,000 mg/L and above, three significant figures.

## 9. Precision

Precision data are not available for this method.