# TSS procedure

## Generalities

Suspended solids measurements are used to quantify the content of materials retained by the filter media after filtration.The measurement protocol of total suspended solids (TSS) is established in reference to the European standard NF EN 872. The filter medium is a circular borosilicate fiberglass filter with a diameter of 47 mm. This method applies to waters containing a concentration of pollutant from 2 mg/l to 1000 mg/l.

## Material required

- Glass fiber filter with a diameter of 47 mm
- Filter holder
- Stainless steel tank of 5 liters
- Pressure gauge

## Method of operation

This test consists in filtering a suspension under a constant pressure set by the operator, between 0.1 and 0.5 bar. The measurement is done at an ambient temperature of 20°C ± 2°C. In order to eliminate any form of pollution, the filter must be rinsed with microfiltered water and then dried in an oven for at least 2 hours at 105°C before being weighed under vacuum, avoiding any form of contamination of the filter. Once the tank is filled with the sample and the air is purged, place the filter in the holder and screw it to the stainless steel tank, making sure the outlet valve is closed. Once the device is ready to operate, the operator applies pressure and opens the outlet valve. It is then sufficient to collect a volume of filtrate of about 500 ml or more (to be adjusted according to the concentration of the filtered suspension). The filter must then be dried in the oven for at least 1 h at 105 °C, then weighed in order to know the TSS content with the expression :

$$\rho = \frac{1000 \times (m_f - m_i)}{V_f}$$

$m_f$ : mass of the filter after filtration and drying in the oven

$m_i$ : filter mass before filtration

$V_f$ : volume of filtered suspensions

**QUALI-FILTRES**
ZAC Vence Ecoparc, 9 rue des platanes | 38120 St Egrève, FRANCE
contact@quali-filtres.com | +33 4 76 26 91 75 | www.quali-filtres.com