

**Suspended solids****383****10 - 750 mg/l TSS****Turbidity / Attenuated Radiation Method****Instrument specific information**

The test can be performed on the following devices. In addition, the required cuvette and the absorption range of the photometer are indicated.

Instrument Type	Cuvette	$\lambda$	Measuring Range
SpectroDirect, XD 7000, XD 7500	□ 50 mm	810 nm	10 - 750 mg/l TSS

**Material**

Required material (partly optional):

Reagents	Packaging Unit	Part Number
no reagent required		

**Application List**

- Drinking Water Treatment
- Waste Water Treatment
- Raw Water Treatment

**Sampling**

1. Measure the water sample as soon as possible after sampling. It is possible to store the sample at 4°C for 7 days in plastic or glass containers. The measurement should be at the same temperature as the sample. Temperature differences between measurement and sampling can change the result of the measurement.

**Notes**

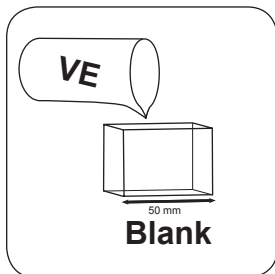
1. The photometric determination of Suspended Solids is based on a gravimetric method. In a laboratory this is usually done by evaporation of the filter residue of a filtrated water sample in a furnace at 103°C – 105°C and weighing of the dried residue.
2. When higher accuracy is required perform a gravimetric determination of a water sample. The result can be used to calibrate the photometer with the same water sample.
3. The estimated detection limit is 20 mg/L TSS.

## Implementation of the provision Total suspended solids

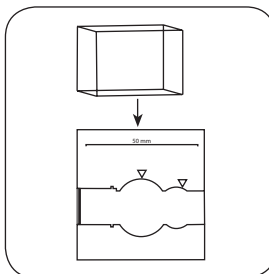
Select the method on the device

For this method, no ZERO measurements are to be carried out with the following devices: XD 7000, XD 7500

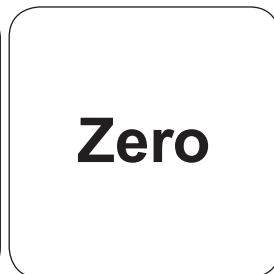
Homogenize 500 ml of the water sample in a blender on high speed for 2 minutes



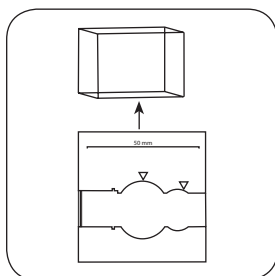
Fill 50 mm vial with deionised water .



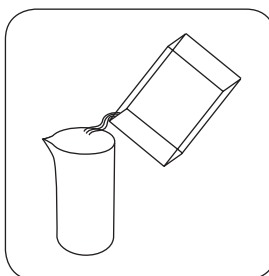
Place **blank** in the sample chamber. • Pay attention to the positioning.



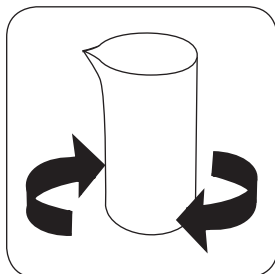
Press the **ZERO** button.



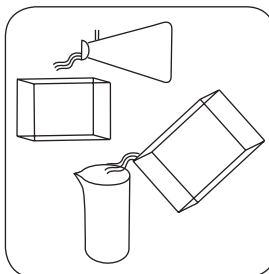
Remove **vial** from the sample chamber. Empty vial.



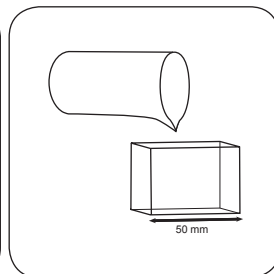
For devices that require **no ZERO measurement** , start here.



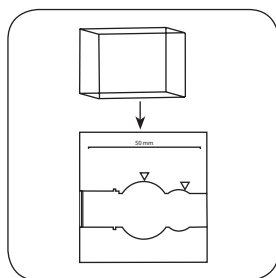
Mix homogenised water sample thoroughly.



Rinse out vial with prepared sample .



**Fill 50 mm vial with sample.**



Place **sample vial** in the sample chamber. • Pay attention to the positioning.

The result in mg/l TSS (Total Suspended Solids) appears on the display.



Press the **TEST** (XD: **START**) button.

## Chemical Method

Turbidity / Attenuated Radiation Method

## Appendix

### Interferences

#### Removeable Interferences

- Air bubbles interfere and can be removed by swirling the vial gently.
- Colour interferes if light is absorbed at 660 nm.

#### Derived from

EN 872:2005

<sup>a)</sup> determination of free, combined and total | <sup>b)</sup> Reactor is necessary for COD (150 °C), TOC (120 °C) and total -chromium, - phosphate, -nitrogen, (100 °C) | <sup>c)</sup> MultiDirect: Adapter is necessary for Vacu-vials® (Order code 19 20 75) | <sup>d)</sup> Spectroquant® is a Merck KGaA Trademark | <sup>e)</sup> alternative reagent, used instead of DPD No.1/No.3 in case of turbidity in the water sample caused by high concentration of calcium and/or high conductivity | <sup>f)</sup> additionally required for determination of bromine, chlorine dioxide and ozone in the presence of chlorine | <sup>g)</sup> Reagent recovers most insoluble iron oxides without digestion | <sup>h)</sup> additionally required for samples with hardness values above 300 mg/l CaCO<sub>3</sub> | <sup>i)</sup> high range by dilution | <sup>\*</sup> including stirring rod, 10 cm