Turbidity 50 M385

5 - 500 FAU

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	λ	Measuring Range
MD 600, SpectroDirect, XD 7000, XD 7500	□ 50 mm	860 nm	5 - 500 FAU

Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
no reagent required		

Application List

- 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 48 hours 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 turbidity of the sample.

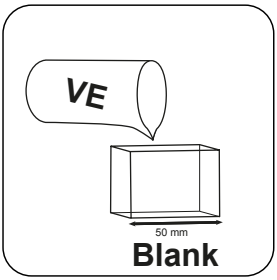
Notes

1. This test uses an attenuated radiation method for the reading of Formazin Attenuation Units (FAU). The results can not be used for documenting purposes, but may be used for routine measurements because the attenuated radiation method is different from the Nephelometric method.

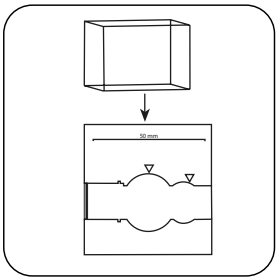
Determination of Turbidity

Select the method on the device.

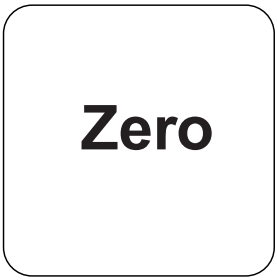
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



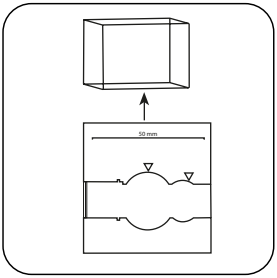
Fill **50 mm vial** with **deionised water** .



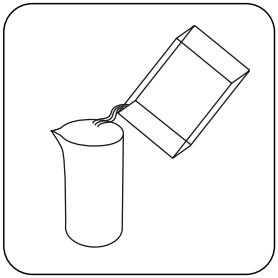
Place **sample vial** in the sample chamber. • Pay attention to the positioning.



Press the **ZERO** button.

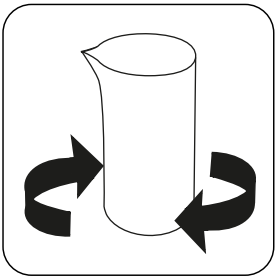


Remove **vial** from the sample chamber.

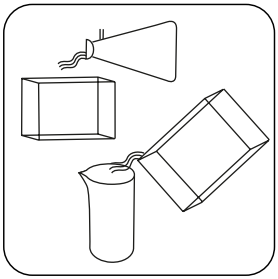


Empty vial.

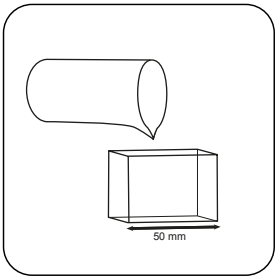
For devices that require **no ZERO measurement** , **start here**.



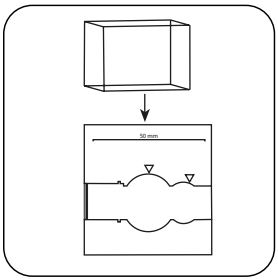
Mix water sample thoroughly.



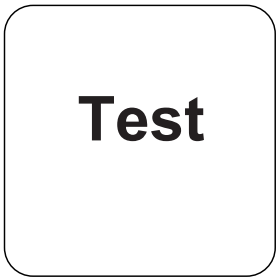
Rinse out vial with prepared sample .



Fill 50 mm vial with **sample**.



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



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

The result in FAU appears on the display.

Chemical Method

Attenuated Radiation Method

Appendix

Interferences

Removeable Interferences

- Air bubbles interfere with turbidity measurements. These can be removed using an ultrasonic bath.
- By measuring at 860 nm, colour interference is reduced to a minimum. At 860 nm light absorption and gas bubbles disturb the measurement.

Method Validation

Limit of Detection	0.9 FAU
Limit of Quantification	2.7 FAU
End of Measuring Range	500 FAU
Sensitivity	253 FAU / Abs
Confidence Intervall	3.42 FAU
Standard Deviation	1.49 FAU
Variation Coefficient	0.59 %

Bibliography

FWPCA Methods for Chemical Analysis of Water and Wastes, 275 (1969)