



Turbidity Tube - Instruction Manual

Product Description

The turbidity tube is designed to be a simple easy to use device for measuring the clarity of water.

The turbidity tube is supplied as 2 clear plastic tubes, each 30 mm in diameter x 300 mm long. The tubes are pushed together, and a water sample is slowly added. A measurement scale etched in black, along the sides of the tubes provide a measure of water clarity or turbidity.

Turbidity

Turbidity is used as an indicator of the total amount of material suspended in water.

Turbidity can indicate the presence of sediment that has run off from construction sites, from logging sites, mining operations, agricultural operations and industrial discharges. It is also a factor in the suitability of water for drinking and for irrigation purposes.

The more material that is suspended in water, the greater is the water's turbidity and the lower its clarity. Suspended material can be particles of clay, silt, sand, algae, micro-organisms and other substances. Turbidity affects how far light can penetrate into the water. Natural (or background) turbidity levels in waterways vary from <1 NTU in mountain streams, to hundreds of NTU during rainfall events or in naturally turbid (muddy) waters.

Water Sample Collection & Preparation

1. Collect a one litre water sample in a clean bucket or sample bottle. When collecting the sample be sure not to disturb the sediments on the stream or dam bottom.
2. Ensure the tubes are clean.
3. Fit the two frosted ends of the tubes together and gently push all the way home. Lubricate if necessary.
4. Make sure that the sample is well mixed immediately before testing.

5. Undertake the test away from direct sunlight.
6. A white tile or white paper positioned beneath the tube will aid readability

Turbidity Measurement

1. Slowly pour a water sample into the turbidity tube while looking down the tube.
2. Stop pouring when the dark lines on the bottom of the tubes are barely visible.
3. Record the turbidity reading on the side of the tube.
4. If the reading is greater than 200 NTU, the test should be repeated using a sample diluted with clean water. Method: Dilute a new sample 50:50 with distilled water and repeat procedure. Multiply the reading by 2 to obtain the turbidity reading.

Recording Results

1. Clean water samples may provide a reading of better than 10 NTU. That is, the black lines on the base are still visible when the tube is full. Record such results as <10 NTU.
2. The scale on the side of the turbidity tubes is logarithmic (i.e. non-linear) and therefore the gaps between numbers are not equal. When the water level is between two numbers, record the value as less than the lowest of the 2 numbers.

Maintenance & Calibration

1. Wash the tube thoroughly with tap water and ensure the tube is kept clean and free from contamination.
2. Do not use solvents for cleaning, only water or water with a mild detergent.
3. No calibration is generally required, however a correlation curve against a turbidity meter may be beneficial in environmentally sensitive applications.