TURBIDITY METER

- Turbidity, the measure of suspended solids in liquids, is utilized as a measure of water quality and can be leveraged as a way for processors to slash waste, improve sustainability and control consumables. Turbidity Meters are engineered to detect the instant a liquid media reaches a pre-defined specification.
- A turbidity meter, also known as a turbidimeter or nephelometer, is a device that measures the turbidity of liquids.
- Turbidity can have a significant impact on various processes. For example, in the water treatment industry, high turbidity levels can decrease the efficiency of disinfection processes or increase the risk of bacterial growth. Turbidity can also have a detrimental effect on aquatic life and visibility in natural water bodies.

Turbidity Meter Working principle

- The working principle of turbidity meters can be broadly classified into two categories: nephelometric and turbidimetric.

Nephelometric Turbidity Meters

- A nephelometric turbidity meter works by measuring the scattered light at an angle of 90 degrees from the incident beam. This measurement is known as the backscatter reading.
- The advantage of a backscatter reading is that it is relatively insensitive to changes in the color of the liquid being measured. This makes nephelometric turbidity meters particularly useful for measuring turbidity in water treatment applications.

Turbidimetric Turbidity Meters

- Turbidimetric turbidity meters measure the amount of light that is absorbed by suspended particles in a liquid. This measurement is known as the attenuance

reading.

- The advantage of an attenuance reading is that it can be more accurate than a backscatter reading for liquids with low turbidity. However, it is more sensitive to changes in the color of the liquid being measured.

Calibrating a Turbidity Meter

- Calibrating a turbidity meter is essential to ensure accurate and reliable readings. There are various methods for calibrating a turbidity meter, including using a standard solution, a formazin solution, or a turbidity standard.
- A standard solution is a solution with a known turbidity value. It is typically made by suspending a specific amount of polystyrene beads in distilled water. The turbidity of the standard solution is then measured using a reference method, such as a nephelometer.
- A formazin solution is a more precise and consistent way of calibrating a turbidity meter. It is a standardized solution of 4000 NTU that is commonly used in the water industry for calibrating turbidity meters.