

**Product Code . JL-CE-8025**

## Dipole Meter



### Description

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Dipole Meter

#### Objective:-

Determination of dielectric constant of non aqueous liquid at different concentration and hence determination of Dipole Moment (e.g. of Nitrobenzene etc.).

#### Theory:-

Dipole Meter is an adaptable instrument that is used for measuring the dielectric constant of non-polar liquids.

In the equipment, a particular circuit has been developed for an audio oscillator that produces a stabilized wave.

Then experimental liquid whose dielectric constant has to be determined is taken and assembly is immersed in the liquid, resulting in a change in oscillation frequency.

In this experiment, the dielectric cell is standardized using reference liquid having known dielectric constant by immersing the dielectric cell assembly into reference Liquid.

From resulting shift, the capacitance of cell in the unknown liquid is calculated (CX).

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**The apparatus consists of:-**

The main Unit having Frequency Counter, Audio Oscillator and suitable Electronic Circuitry Dielectric Cell Unit consists of

1. Dielectric Cell (SS) assembly with Teflon top & BNC connector.
  2. Beaker (100 ml).
  3. Attachment for circulation of water from the external water bath.
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