



**Experiment**

Dielectric Constant in Solids

**Probes Arrangement**

It has two individually spring loaded probes. The probes arrangement is mounted in a suitable stand, which also holds the sample plate. To ensure the correct measurement of sample temperature, the RTD is embedded in the sample plate just below the sample. This stand also serves as the lid of temperature controlled oven. Proper leads are provided for connection to Capacitance Meter and Temperature Controller.

**Sample**

Barium Titanate (BaTiO<sub>3</sub>)

**Oven**

This is a high quality temperature controlled oven. The oven has been designed for fast heating and cooling rates, which enhances the effectiveness of the controller.

**Main Units**

The Set-up consists of two units housed in the same cabinet.

**Oven Controller**

Platinum RTD (A class) has been used for sensing the temperature. A Wheatstone bridge and an instrumentation amplifier are used for signal conditioning. Feedback circuit ensures offset and linearity trimming and a fast accurate control of the oven temperature.

Temperature Range	Ambient to 473K
Resolution	1K
Stability	0.5K
Measurement Accuracy	1K (typical)
Oven	Specially designed for Dielectric measurement
Sensor	RTD (A class)
Display	3½ digit, 7 segment LED with autopolarity and decimal indication
Power	150W

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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- a) Specifications of the Oven
- b) Digital Capacitance Meter  
 This a compact direct reading instrument for the measurement of capacitance of the sample.
- c) Specifications of the Oven

Range	50-6000pf
Resolution	1pf
Display	3½ digit, 7 segment LED with autopolarity and decimal indication

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