55958 Measurement of Susceptibility of Paramagnetic Solution is a laboratory setup to measure susceptibility of paramagnetic solution by Quinck's tube Method. Susceptibility refers to that quantity of a substance by virtue of which the substance get magnetized. In other words, it refers to the extent of induced magnetization in unit field. On the basis of Susceptibility, a substance can be classified as diamagnetic, paramagnetic and ferromagnetic substance, which is an important observation in material science.

Setup consists of the following equipments :

- Quinck's tube with stand l Electromagnet
- Gauss and Tesla Meter Nvis 621 with InAs probe
- Constant Current Power Supply Nvis 623
- Paramagnetic Sample

Features

1. Quink's tube is provided with measuring scale
2. Provided with a magnifying lens
3. Gauss and Tesla meter for measuring magnetic field with LCD and PC interface facility
4. InAs Probe for better sensitivity of magnetic field
5. Provided with an Electromagnet
6. Field direction reversible
7. Gap between poles (Minimum 1mm and Maximum upto 40mm)
8. Field adjustment smoothly
9. Constant current source with LCD display

Object

1. Measurement of Susceptibility of Ferric Chloride (FeCl) Paramagnetic solution 3
2. Measurement of Susceptibility of Mangnese Sulphate (MnSO) Paramagnetic solution

Technical Specifications

Quinck's Tube: It is a U-shaped glass tube. One of the limbs of the tube is wide and the other one is narrow. Wide limb of the tube is fitted with the stand

Paramagnetic Samples: It includes two paramagnetic material one is Ferric Chloride (FeCl) and other is Manganese Sulphate (MnSO)

Electromagnet

Poles	:	55mm diameter
Coils	:	2 nos.
Resistance	:	6O (3W/Coil) (approximate)
Input Current	:	3.5A at 20V
Weight	:	32.8kg
Field Generation	:	10kg Gauss

Constant Current Power Supply

Current Range	:	0 to 3.5A
Output Voltage	:	20V
Display	:	LCD, 16 x 2
Mains	:	230V AC ±10%, 50Hz

Gauss and Tesla meter

Microcontroller Based LCD Display for Measurement of Magnetic Field in Gauss and Tesla, With PC Interface facility.

Sensor	:	InAs for better sensitivity
Range	:	0-20 kg
Special feature	:	Indicate the direction of the magnetic field
Mains	:	230V AC ±10 %, 50Hz
Mains Supply	:	230V ±10%, 50Hz

Note: Specifications are subject to change.

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