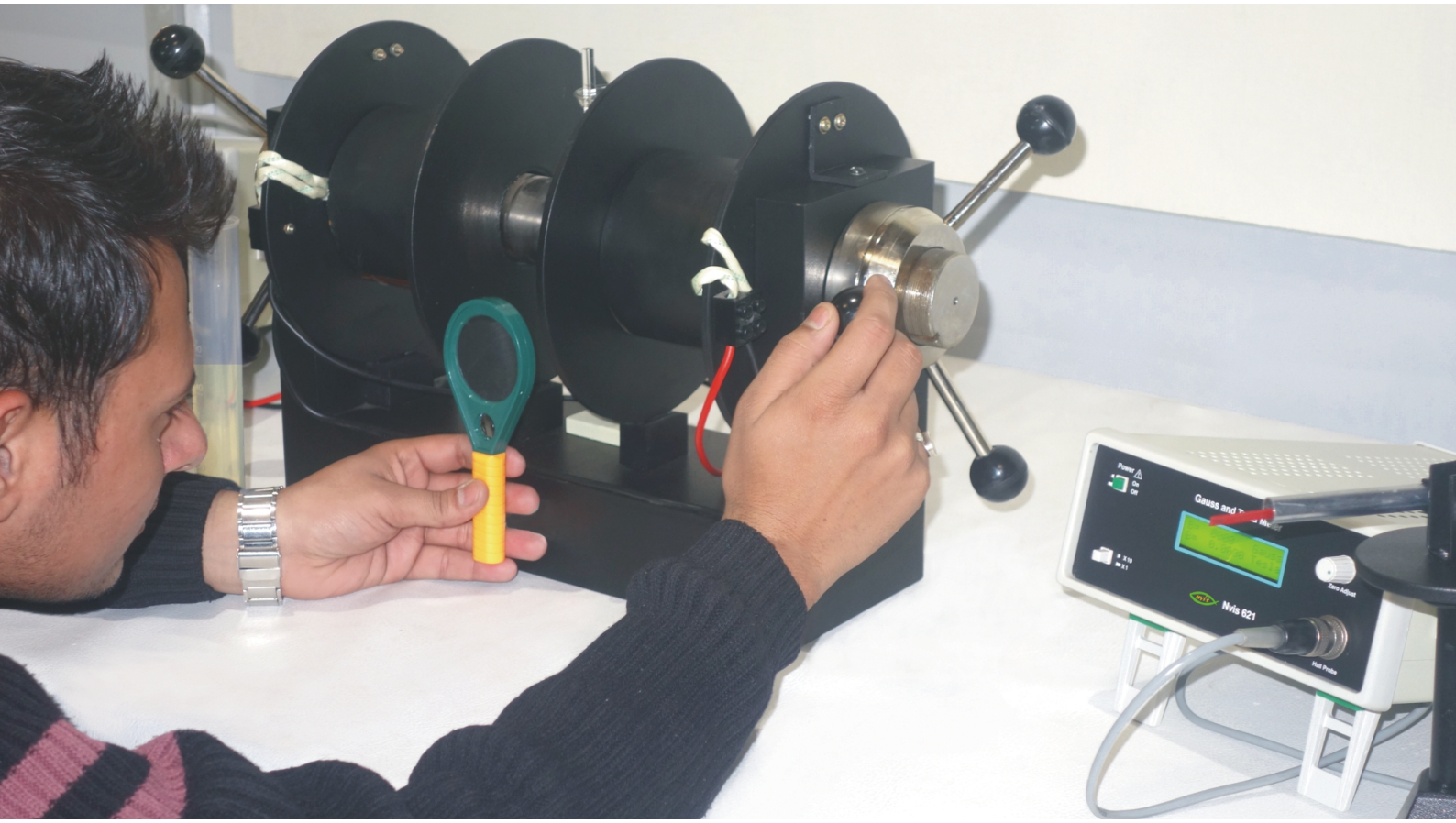
Measurement of Susceptibility of Paramagnetic Solution

Nvis 6102



Nvis 6102 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

- **Quink's tube is provided with measuring scale**
- **Provided with a magnifying lens**
- **Gauss and Tesla meter for measuring magnetic field with LCD and PC interface facility**
- **InAs Probe for better sensitivity of magnetic field**
- **Provided with an Electromagnet**
- **Field direction reversible**
- **Gap between poles (Minimum 1mm and Maximum upto 40mm)**
- **Field adjustment smoothly**
- **Constant current source with LCD display**
- **Online Product Tutorial**

Measurement of Susceptibility of Paramagnetic Solution

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Scope of Learning

- Measurement of Susceptibility of Ferric Chloride ($FeCl_3$) Paramagnetic solution
- Measurement of Susceptibility of Mangnese Sulphate ($MnSO_4$) 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 ($FeCl_3$) and other is Manganese Sulphate ($MnSO_4$)

Electromagnet

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

Constant Current Power Supply Nvis 623

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

Gauss and Tesla meter Nvis 621

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

Subject to change - Version 2.0

Designed & Manufactured in India by

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