



55931 Viscosity Measurement Apparatus demonstrates viscosity experiment and elicit the interest of students in the field of fluid mechanics. This apparatus verifies Stoke's law and helps us to understand the motion of object inside the fluid. Here "falling sphere" method is used to determine the viscosity of liquid. This method describes a general procedure for the determination of not only the viscosity but the density of liquid as well. This activity enables us to observe the relative viscosity and density of liquids like glycerin, castor oil, mustard oil etc. Our set-up covers both manual and automatic viscosity determination.

Features

1. Measurement unit enables us to capture and store time readings, and gives instant result of viscosity
2. Centrally bored rubber cork provides same trajectory for all spheres
3. Dipping bowls provide easy quenching of sphere, and prevent any kind of mixing into each other

Object

1. To determine the coefficient of viscosity of glycerin by falling sphere method
2. To determine the density of given liquid using steel sphere, glass beads
3. To predict the fall time of different size spheres of same material.

Technical Specifications

Tube stand

- Base (cast iron) : 23 x 15cm²
- Rod (mild steel) : 110cm

Cylindrical tube

- Length : 100cm (approx.)
- Internal diameter : 3.5cm
- External diameter : 4.0cm
- Volume : 962cm³

Measurement Unit

- Mains Supply : 230V ±10%, 50Hz
- Adaptor Output : 5V DC
- Timer checking time : 5 sec
- Time segments : 3

Steel sphere

- Diameter : 0.2cm to 0.5cm
- Density : 7.85gm/cm³

Glass beads

- Diameter : 0.35cm to 0.45cm
- Density : 2.5gm/cm³

Note: Specifications are subject to change.