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**Product Name :**  
Viscosity And Particle Drag

**Product Code :**  
LBNY-0005-10300012



#### **Description :**

The flume is made of transparent glass, precision-built to ensure parallel walls and a consistently accurate cross section along its length. The Viscosity and Particle Drag apparatus is a simple falling-sphere viscometer. The self-standing unit holds two glass tubes filled with the test fluids, for comparisons and to minimize draining and refilling of the fluids after experimentation. A sturdy steel square-section firmly supports the channel throughout its length. It has a floor-standing frame that supports the working section at a convenient eye-level position for students. The back plate has a low-voltage backlight so students can easily see the test spheres through the fluid. Students fill the two tubes with their chosen test fluid, then select a sphere of the correct density and size for the fluid. They drop the sphere into the test fluid at the top of the glass tube. The valve system minimizes the fluid loss from the tube and helps when draining the tube after the tests are complete. Students may also make their own use shapes to test in the unit. The shapes must fit through the valve at the base (maximum 8 mm in any single dimension). They then use a stopwatch (included) to measure the time taken for the sphere to fall a set distance down the tube. When the test sphere reaches the bottom of the tube, it enters a valve that the students turns, dropping the sphere into a collection vial for recovery. The apparatus can be used with any fluid that can be safely handled and is chemically compatible with the wetted parts of the equipment - glass and PTFE. Suitable test fluids include water, thin machine oil, castor oil and motor oil.

#### **Technical Specification :**

##### **Learning Out comes:**

Visual demonstration of viscosity, simultaneously on two different fluids  
Determination of the drag coefficient of various spheres  
Determination of the viscosity of different fluids.



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