



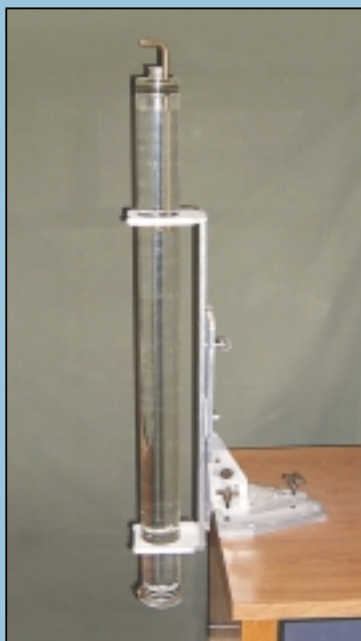
# FLUIDS LABORATORY

## College of Engineering

### Measurement of Density and Kinematic Viscosity

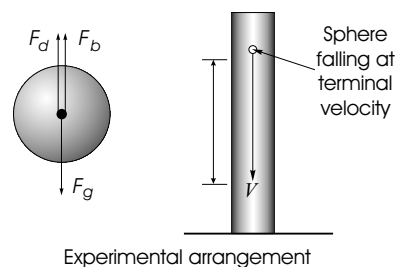
#### Purpose

To measure the kinematic viscosity and density of a fluid, the uncertainty of the measurements, to compare the measured kinematic viscosity and density to the manufacturer's values, and to demonstrate the effects of viscosity by comparison of the fall times for spheres of different densities.



#### Test Design

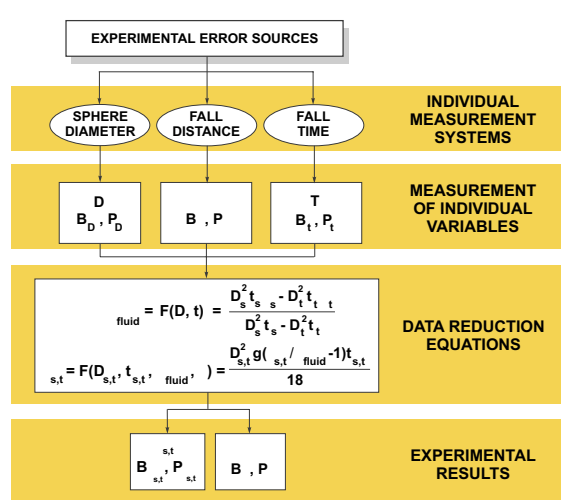
Measurement of the kinematic viscosity through its effect on a falling object.



#### Data Analysis

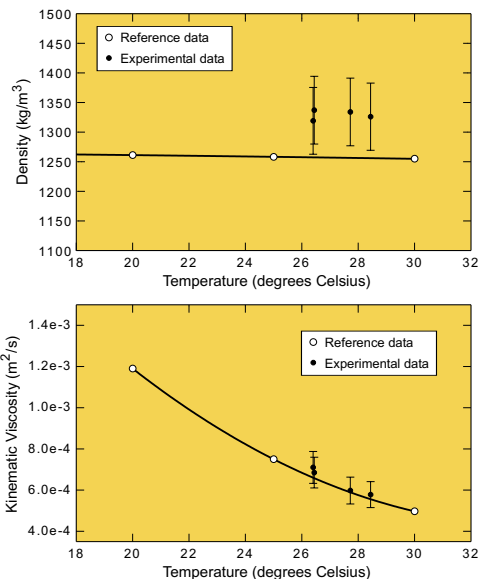
- Determine the fluid density
- Determine viscosity
- Estimate uncertainties
- Compare the measured viscosity to manufacturer values

#### Measurement Systems



Block diagram of density/viscosity experiment including: measurement systems, data reduction equations, and results

#### Results



Comparison between reference data for the density and viscosity (100% aqueous glycerin solution) and experimental results (99% aqueous glycerin solution)