

17.4

Viscosity of Fluids



Question: How can viscosity be measured?

1 Measuring viscosity

2 Setting up your viscometer

There are no questions to answer in parts 1 and 2.

3 Using your viscometer

Follow the procedures and record your data in Table 1.

Table 1: Average velocity of marble in liquid.

Type of liquid	Distance traveled	Time required	Average velocity of marble
Trial 1			
Trial 2			
Trial 3			
Find the average of your three values for velocity and record it here:			

4 Comparing class data

Each lab group found the data for a different substance. Record the data for each substance in Table 2.

Table 2: Class data for average velocity of marble in liquids of different viscosities

Substance	Avg. velocity of marble in substance at 20°C
group 1:	
group 2:	
group 3:	
group 4:	
group 5:	

5**Analyzing class data**

- a. Rewrite Table 2, listing the liquids from **least** viscous to **most** viscous.

Substance	Average velocity of marble

- b. Compare this data with the data from the density column (Investigation 17.2). Does there seem to be a relationship between density and viscosity at room temperature? In other words, if liquids have low density, do they also have low viscosity? Provide an example to justify your answer.
