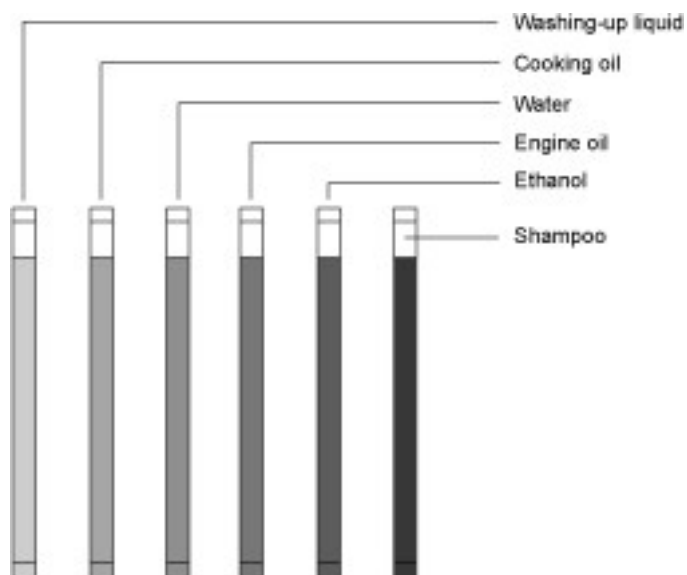


Viscosity – student sheet

Introduction

Students are provided with a set of identical tubes each containing a different liquid. Students measure the time taken for a bubble to rise through the liquid. This is used to compare the viscosity of the liquids.



Equipment

Apparatus

- Eye protection if desired
- Stopwatch
- Sealed tubes of different liquids

Chemicals

Choose from:

- Water
- Cooking oil
- Washing up liquid
- Ethanol
- Shampoo or bubble bath

Health, safety and technical notes

- Read our standard health and safety guidance here <https://rsc.li/3P15Yiq>
- Wear eye protection if desired.
- Ethanol is highly flammable, see CLEAPSS Hazcard [HC040a](https://rsc.li/3VP1KMT).

Procedure

1. Take one of the tubes provided.
2. Ensure the bubble is at the top and the tube is held vertical.
3. Quickly invert the tube and measure the time it takes for the bubble to reach the top.
4. Repeat this measurement for all the samples
5. Complete the table provided.

Liquid	Time taken in seconds
Water	
Cooking oil	
Washing up liquid	
Ethanol	
Shampoo/Bubble bath	

Questions

1. Which liquid is the most viscous?
2. Which liquid is the least viscous?
3. Design a different experiment for comparing the viscosity of liquids.