Common properties of bodies
Volume

Determining the volume of a drop of water

Object of the experiment

1. Determining the volume of a drop of water

Setup

- Align the dropper funnel carefully above the graduated cylinder.

Apparatus

1 Dropper funnel, 75 ml, ST 29, graduated	665 073
1 Measuring cylinder, 10 ml, with plastic base	665 751
1 Stand base, V-shape, small	300 02
1 Stand rod, 75 cm, 12 mm diam.	300 43
2 Leybold multiclamps	301 01
2 Universal clamps, 0…80 mm	666 555
1 Measuring beaker, PP, 1000 ml	604 211
1 Colouring, red, 10 g	309 42

Carrying out the experiment

- Add colouring to about 200 ml of water in the measuring beaker.
- Close the stopcock of the dropper funnel, and pour coloured water into the funnel.
- Open the stopcock carefully. As soon as the first drop falls from the funnel into the graduated cylinder, start counting the drops.
- Read the volume of liquid from the graduated cylinder each time when 10 more drops have fallen into the cylinder.

Measuring example

Number N of drops	V_N in ml	$*V_{drop}$ in ml
10	1.2	0.12
20	2.2	0.11
30	3.2	0.11
40	4.5	0.11
50	5.5	0.11

*round values

Evaluation

For a drop of water the volume $V_{drop} = 0.11$ ml is obtained.

Remark:

The result obtained in this experiment enables the water consumption to be estimated that arises when a tap drips regularly during a given time interval.

KR 208

LEYBOLD DIDACTIC GMBH · Leyboldstrasse 1 · D-50354 Hürth · Phone (02233) 604-0 · Fax (02233) 604-222 · e-mail: info@leybold-didactic.de