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.

Measuring example

<table>
<thead>
<tr>
<th>Number N of drops</th>
<th>$V_N$ in ml</th>
<th>$V_{drop}$ in ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1.2</td>
<td>0.12</td>
</tr>
<tr>
<td>20</td>
<td>2.2</td>
<td>0.11</td>
</tr>
<tr>
<td>30</td>
<td>3.2</td>
<td>0.11</td>
</tr>
<tr>
<td>40</td>
<td>4.5</td>
<td>0.11</td>
</tr>
<tr>
<td>50</td>
<td>5.5</td>
<td>0.11</td>
</tr>
</tbody>
</table>

*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.