3B SCIENTIFIC® PHYSICS

Surface Tension Ring U8412160

Instruction Sheet

06/08 ALF

1. Description

The surface tension ring is used for measuring the surface tension of liquids.

It consists of an aluminium ring with a sharp-edged profile. Attached to it are three threads with a hook for hanging it on a dynamometer.

2. Technical Data

Diameter:	60 mm
Weight:	5 g approx.

3. Sample experiments

Measuring the pulling-off force

Additional equipment needed:

1 Laboratory jack, type II	U15020
1 Precision dynamometer, 0.1 N	U20030
1 Beaker, 600 ml from set	U14210
1 Stand base	U13270
1 Stand rod, 470 mm	U15002
1 Clamp with hook	U13252
Distilled water	

- Set up the stand rod in the base and attach the clamp with hook near the top of the rod.

- Suspend the surface tension ring from the dynamometer and suspend both together from the hook.
- Fill the beaker with distilled water and place it on the extended laboratory jack.
- Move the laboratory jack with the beaker on it up to the stand and lower the ring until it is completely immersed in the water.
- Read the force on the dynamometer and note it down.
- Slowly lower the laboratory jack while observing the dynamometer scale.
- Record the force at the instant when the edge of the ring comes away from the water's surface.

The difference between the two forces is the force needed to overcome the surface tension and pull the ring clear.