

Viscosity measurements using the following substances

- Light oils, machine oils, petroleum, petroleum ether, diesel (mineral oils and fuels)
- Plastic solutions, resin solutions, adhesive solutions, latex dispersions (polymer chemicals)
- Printers' ink, varnish, water-based paints, inks (inks and paints)
- Emulsions, suspensions, solutions, extracts (cosmetics/pharmaceuticals)
- Emulsions, dispersions (paper industry)
- Liquid detergents, washing-up liquid, surfactant solutions (detergents)
- Honey, fruit juice, beer, milk (food industry)
- Gases and mixtures of gases

Falling Sphere Viscometer

Höppler-type falling sphere viscometer for simple but accurate measurement of dynamic viscosity of transparent Newtonian fluids. The sphere rolls and slides inside an inclined cylindrical tube filled with the fluid to be tested. The viscosity is measured in $\text{mPa} \cdot \text{s}$ and is derived directly from the time the sphere takes to fall a specified distance through the fluid in the measuring tube. The tube can then be turned upside-down so that time the sphere takes to fall back can also be measured. The tube is situated inside a water bath, which can be filled with water at a specific temperature in order to measure how viscosity depends on temperature.

Includes:

- Falling sphere viscometer with 6 spheres and 1 ball gauge
- Thermometer 0 – 100° C
- Cleaning set
- Test certificate with accurate values for sphere constant K and density ρ for converting duration of fall to actual viscosity.

Technical data

Measuring range:	0.5 $\text{mPa} \cdot \text{s}$ to $7 \cdot 10^4 \text{ mPa} \cdot \text{s}$ (as per DIN 53015) > $7 \cdot 10^4 \text{ mPa} \cdot \text{s}$ (for sphere fall times > 300 s)
Measurement precision	0.5 to 2% (depending on spheres used)
Spheres:	#1, #2: Borosilicate glass #3, #4: Ni-iron #5, #6: Steel
Diameter of spheres:	11.00 to 15.81 mm
Diameter of measuring tube:	15.95 mm
Fall times for spheres	30 to 450 s
Length of measured distance:	100 mm in both directions
Operating angle:	10° to vertical
Additional working angles	70°, 60°, 50° to horizontal
Volume when full:	40 ml
Permissible temperature range:	-60°C to +150°C
Dimensions:	180x220x330 mm
Weight:	3.1 kg

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Additionally required:

P-1002811 Digital Stopwatch

Additionally recommended:

P-1002622 Silicone Tubing (2x)

P-1008654 Immersion/Circulation Thermostat (230 V, 50/60 Hz)

or

P-1008653 Immersion/Circulation Thermostat (115 V, 50/60 Hz)

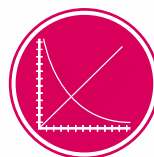
Glycerine

250 ml of glycerine in aqueous solution for experiments on viscosity. In glass bottle
Concentration: 85%

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