

||||||| **iVisc** – User-friendly system for the measurement of kinematic viscosity



iVisc – precision automatically made easy

Your stopwatch may take a break

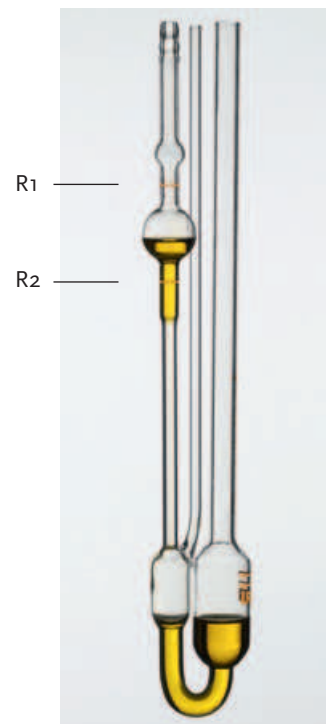
Capillary viscometry - the reference method

In capillary viscometers, the velocity gradient of a laminar flow within a measuring capillary is used for viscosity measurement, giving the most precise readings.

The driving force is the sample itself, i.e. gravity acting on the liquid column of the sample. With Ubbelohde viscometers, the time required for the liquid meniscus to descend from the ring mark R1 to the ring mark R2 is measured precisely, historically with a stopwatch, currently by electronic means

Precision according to standard

- || The special precision of the method according to ISO 3105 and ASTM D445 results from the precision of the LAUDA Scientific capillary, the vertical alignment, the accurate time measurement to 1/100s by using infrared light barriers and, of course, the temperature control with LAUDA thermostats to 1/100 °C accuracy.
- || Worldwide compatibility of your results is guaranteed with this standard.



$$\nu = K \cdot (t - \Delta t)$$

Reproducible and precise measurement

Simple, automatic viscosity determination with the iVisc – ideal for person-independent, GLP-compliant measurement. Simply plug in the USB cable, start the software and the capillary viscometer is ready for operation.

For all capillaries

- || Compatible with all common capillaries (Ubbelohde, Cannon-Fenske, Mikro-Ubbelohde and many more).

Relevant technical standards

DIN ISO 307, DIN EN 1628-2,
DIN EN 1628-3, DIN EN 922,
PharmEUR, ISO 2909, ASTM D2532,
IEC 60450

Applications in the polymer industry

Viscometric determination of molar mass, viscosity number and Staudinger Index provides important information about the polymer structure for production, processing and application. Scientific rheological investigations profit also from the additional information of these results.

Typical fields of application

- || Technical polymers, transparent polyolefins, polyvinyl chloride, medical polymers, cellulose and papers

Other applications

- || Lubricants and fuels, insulating oils, waxes, resins, silicone oils and polyols

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Comprehensive solutions

For determination of absolute viscosity of oils and other Newtonian liquids

Highest cost and handling efficiency based on **iVisc**

Research and development of lubricants

- || iVisc and Viscotemp 18 G are a budget and bench-space sensitive way to measure viscosity
- || Precise measurement in accordance to ASTM D 445
- || Compatible with Ubbelohde and Cannon-Fenske viscometers
- || External cooler for measurements at 20 °C (optional)
- || Recommended sample throughput 1 to 5 samples per day



Easy to operate and compact: automatic, space-saving **iVisc** – your start with professional viscometry

For quality control of polymers, recycled materials, and finished products

- || Bench-space sensitive solution by combining iVisc and Viscocool 6
- || Peltier-based, highly precise temperature control from 15 to 90 °C
- || Exceptional temperature stability < 0.01 °C without external cooling
- || Ideal platform for flexible polymer characterization
- || Comprehensive calculation algorithms already integrated
- || Recommended sample throughput 2 to 4 samples per day



Duo.Visc – compactness and precision for kinematic viscosity measurements

Unique design with highest flexibility

- || Integrated thermo-electric Peltier unit for wide temperature range of 20...100 °C without external cooling
- || Dual bath for independent temperature control via software
- || Glass cylinder to enable open view to capillary
- || Status indicator to provide direct feedback concerning test status
- || Due to internal cooling 50 % less bench-space area required



Viscocool 6 and ET 15 S

- || Peltier technology for smallest bench space (for Viscocool 6)
- || Temperature range 15 to 90 °C (Viscocool 6) or ambient temperature up to 100 °C (ET 15 S) without external cooling
- || Easy setup for quick cleaning
- || Controllable variopump for perfect homogeneity



The right capillary for every application

Standard-compliant Ubbelohde and Micro-Ubbelohde capillary tube

- || For viscosities from 0,3 mm/s to 30,000 mm/s
- || Also available as dilution capillary or for automatic cleaning
- || With calibration certificate
- || Durable ring marks and serial numbers



50 years of experience and continuous dialog with our customers – the basis for the Visco.Fix system.

Your everyday life: glass breakage of your sensitive Ubbelohde capillary. Our solution: Visco.Fix – makes work reliable, clean and safe:

Reliable

- || Even in the hectic daily laboratory routine – our capillaries with Visco.Fix are effectively protected.
- || Significantly longer lifetime due to made-to-last design
- || Higher precision due to longer use of the same capillary
- || Always the right capillary at hand with the Visco.Fix carousel

Clean

- || Easy cleaning with individual beakers
- || For clean and safe draining and drying
- || No more dust inside your capillaries

Safe

- || No more glass breakage in the tempering bath
- || Robust in handling and transport
- || Convenient storage of the capillaries



Technical Data

Temperature range	-20...150 °C	Dimensions (W/D/H)	95 x 96 x 425 mm
Viscosity range	0,3...30.000 mm ² /s	Voltage	100...240 V
Timing range	0...9.999,99 s	PC connection	USB
Resolution of time measurement	0,01 s	Minimum sample volume	4 ml / 7 ml
Recommended flow timing	30...1.000 s	Recommended throughput	10 samples per hour
Temperature stability	+/-0,01 K (depending on therm.)	Power consumption	1 Watt
Meniscus detection	Optical (near infrared)	Operating conditions	15...45 °C
		Weight	1,4 kg