



## The "small" Viscograph for measuring the gelatinization characteristics of starch and flour

The Micro Visco-Amylo-Graph® is the newcomer in the world-renowned and proven Viscograph family. It is used, in particular, for measuring the gelatinization properties of starch and products containing starch but also for testing the viscosity of liquids, suspensions, and pasty products -- and, with flours, for determining the enzyme activity ( $\alpha$ -amylase). Consequently, the application fields of this new instrument are ideally suited for the food industry.

In relation to the Viscograph, the Micro Visco-Amylo-Graph® stands out for reduced sample weights and increased heating/cooling rates -- resulting in considerably shorten test times. The results, nevertheless, are comparable to those of the Viscograph.

### The advantages

- Heating/cooling rates up to 10°C/min
- Quick measurement
- Small sample weights
- Integrated, self-optimizing temperature control unit
- Temperature measurement within the sample
- Comfortable measuring and evaluation software under Windows
- Easy handling and cleaning
- Results comparable to those of the standard Viscograph

The instrument is equipped with an integrated, self-optimizing temperature control unit, which together with the comfortable Windows software, permits programming and running of any temperature profiles. Heating/cooling rates from 1.5°C/min up to 10°C/min are possible.

Just like the Viscograph, the Micro Visco-Amylo-Graph® has a rotating bowl. The stirrer, which completely immerses into the sample is connected to a high-resolution torque sensor for precise viscosity determination. The special geometry of the stirrer ensures good mixing of the sample - there is no sedimentation of starch particles.

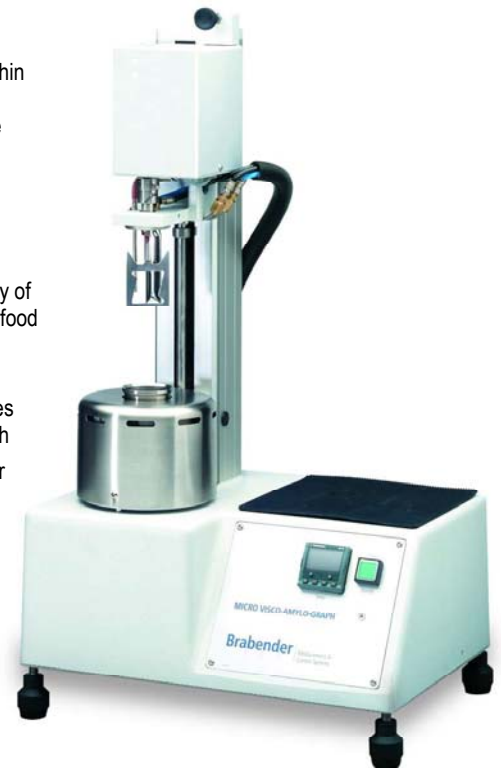
Temperature measurement directly within the sample makes it easy to always precisely assign the temperature to the current viscosity.

### The applications

Benefit from the versatility and reliability of the Micro Visco-Amylo-Graph® - in the food industry...

- Measure the gelatinization properties of flour and native or modified starch
- Measure the enzyme activity in flour (e.g. sprout)
- Adjust the diastatic activity by adding enzymes (e.g. malt flour)
- Measure the influence of extrusion conditions onto the extruded product

## Micro Visco-Amylo-Graph®



# Brabender

# Specification

## Micro Visco-Amylo-Graph®

The new, small sample bowl allows you to reduce your sample weights to as little as 5 to 15 g for 110 ml of water, depending on your material. An integrated automatic return-type steam trap prevents loss due to vaporization.

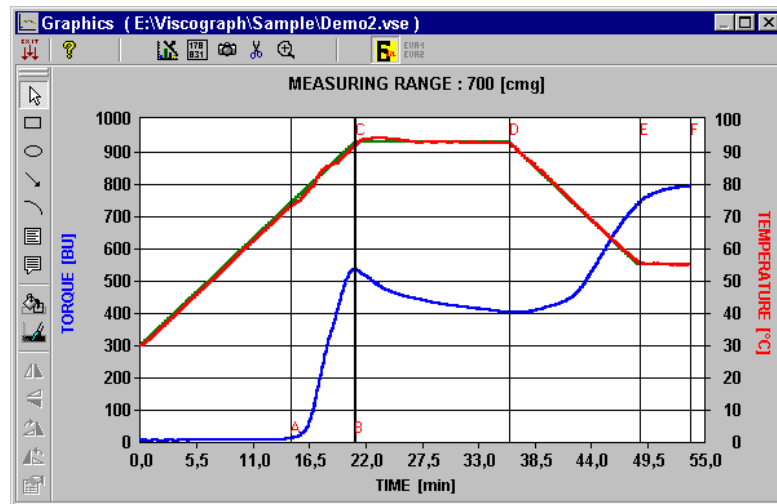
The PC, which is connected via USB, takes over the measured values on-line, evaluates them, and displays them on-line as a diagram. All data and diagrams can be stored under the test name or printed for documentation.

The extensive software running under Windows allows programming of test cycles for manifold samples and applications.

Test conditions and temperature profiles can be stored and recalled at any time for a new test. The user-optimized desktop provides for easy and quick operation of the Micro Visco-Amylo-Graph®.

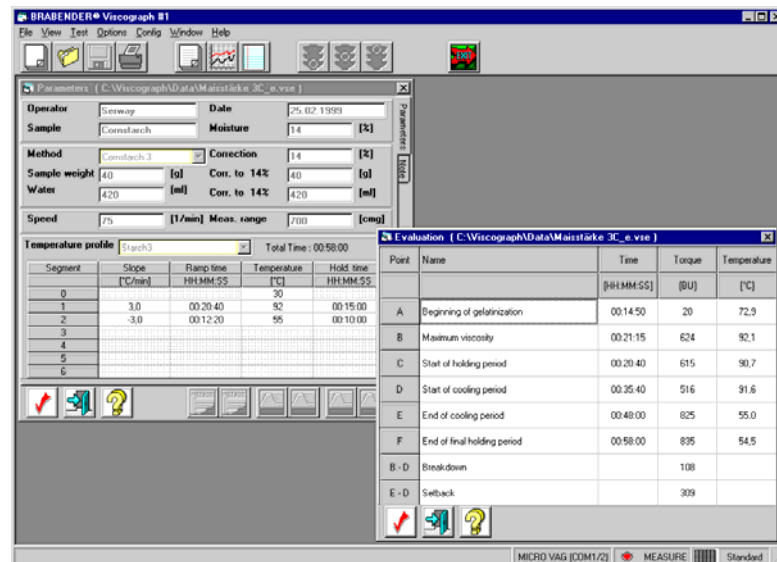
### Specification

- Measuring system with rotating bowl
- Measurement with torque sensor
- Temperature control through RTD within the sample
- Electric resistance radiant heating system
- Immersion-type heat exchanger for cooling the sample with tap water, triggered by solenoid valve
- Electronic temperature program controller



### Technical data

Sample volume	110 ml
Speed	0 - 300 min <sup>-1</sup>
Motor power	60 W
Heating power	500 W
Mains	230 V, 50/60 Hz, 6.3 A 115 V, 50/60 Hz, 6.3 A
Dimensions (H * W * D)	750 * 450 * 380 mm
Weight	28 kg



Subject to changes of design and technical modification without notice.

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