



**Anton Paar**

:: Superior Optical Instruments



## Abbemat 200

The low-cost Abbemat refractometer for routine measurements

# Abbemat™ 200

## The economic Abbemat refractometer for all refractive index measurements

The Abbemat series of refractometers from Anton Paar is now extended to include Abbemat 200. Four decades of expertise in refractometry and high-precision engineering from Anton Paar went into producing this straightforward benchtop refractometer. Abbemat 200 now makes the Abbemat series' sophisticated measuring technology available to users with a low budget.

Abbemat 200 provides accurate and reliable refractive index results for all industrial branches. A multitude of methods

stored in the Abbemat 200 software allows determination of the refractive index and concentration of a wide range of substances, from perfumes to petroleum, juices and syrups to sugar.

As temperature is the biggest influencing factor on the refractive index, Abbemat 200 is equipped with a built-in high-end Peltier thermostating unit. This precisely controls the temperature between 10 °C and 60 °C without the need for an external thermocirculator. Measured data are stored in the memory and available for printout or export as an Excel file via RS232 and USB interfaces. The Abbemat 200 refractometer is ideal for laboratories that require a limited number of measurements without any complex data processing.

## Specifications

### Measuring ranges

#### Refractive Index scale (RI)

Range nD	1.30 to 1.72
Resolution nD	± 0.0001
Accuracy nD <sup>1)</sup>	± 0.0001

### Brix scale

Range	0 to 100 %
Resolution	0.01 %
Accuracy	0.05 %
Measuring Principle	Critical angle of total reflection measurement by shadowline detection with CCD array

### Sample/Prism Temperature Control by built-in solid state thermostat (Peltier)

Temperature range	10 °C to 60 °C
Temperature probe accuracy <sup>1)</sup>	± 0.05 °C
Temperature probe stability <sup>1)</sup>	± 0.002 °C

### Materials in Contact with Samples

Prism	Synthetic sapphire
Sample mold	Stainless steel
Seal	FFKM (Perfluoroelastomer)

### Components

Light source	LED Light source, average life time > 100,000 h
Wavelength (by wavelength-adjusted interference filter)	589 nm
Power requirements	100-240 VAC +10%/-15%, 50/60 Hz, min. 10 W, max. 100 W, depending on sample temperature setting and ambient temperature

### Dimensions

W x H x D [mm]	300 x 145 x 330
Weight [kg]	6.5

<sup>1)</sup> valid at refractometry standard conditions (T=20 °C, 589 nm, ambient temperature approx. 23 °C)

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**Instruments for:**  
Density & concentration measurement      Colloid science  
Rheometry and viscometry                  High-precision temperature measurement  
Sample preparation                              Refractometry  
Microwave synthesis                            Polarimetry  
X-ray structure analysis

\* valid at standard conditions  
Specifications subject to change without notice.

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