



# SACCHAROMAT®



## SACCHAROMAT® - Quartz wedge compensated sugar polarimeter

- The **principle of the quartz wedge compensation** guarantees **high stability of the measured values** even for highly absorbing (dark) samples
- **Measurement of very dark samples** after careful filtration (see **AutoFilt**) **without additional clarification** using NIR-/NIRW2- models (infrared wavelength)
- Measurement and continuous indication of the optical density up to 3.6
- High stability and precision over the whole measuring range
- Fast response time
- Long life at low maintenance costs
- Easy **calculation of purity** possible by **adding a refractometer head**

**SCHMIDT + HAENSCH**

Optisch-elektronische Messinstrumente seit 1864

## SACCHAROMAT®

The SACCHAROMAT® is a sugar polarimeter of highest precision, working with the unique principle of quartz wedge compensation developed by SCHMIDT+HAENSCH, which is standing for measurements with almost no need for calibration during the lifetime of the instrument. A cost saving advantage of the SACCHAROMAT® is its continuous performance. Pouring in a sample directly into a continuous flow through tube the polarization (°Z) of the latter is always being indicated. This is why the SACCHAROMAT® is particularly suited for the control of regularly repeated processes in quality laboratories of receptions of sugar factories and payment systems. The SACCHAROMAT® is also available as NIR or NIRW2 version. These models work with wavelengths in the near infrared. Highly advantageous is that dark samples with a high absorption may be measured after careful filtration without additional clarification being necessary. For the measurement of Pol and Bx values at the same time, the SACCHAROMAT® may be coupled directly with the refractometer measuring head of the DUR series creating a Purity Analyser. This solution is very economical since there is no need for the additional electronic unit of a refractometer. More information on our folder Purity Analyser.

## Applications

The SACCHAROMAT® of SCHMIDT+HAENSCH is performing in the most important sugar factories all over the world. It was developed especially for the analysis of raw-, intermediate- and final products of sugar cane and beet processing.

## Technical Data

<b>Measuring range:</b>	-35 to +105°Z
<b>Resolution:</b>	0.01°Z
<b>Precision:</b>	± 0.02°Z
<b>Lightsource:</b>	Halogen lamp
<b>Wavelength:</b>	Modell Z: 587 nm Modell NIR: 882 nm Modell NIRW2: 587 and 882 nm
<b>Measuring tubes:</b>	Up to 200 mm length
<b>Working temperature:</b>	+10°C to +40°C Autom. temperature compensation using a temperature sensor tube
<b>Response time:</b>	Approx. 6°/sec
<b>Display:</b>	Graphic LCD, 8 lines, 30 characters
<b>Data output:</b>	RS 232 Interface (a.o. request)
<b>Dimensions/Weight:</b>	735x425x200mm (wxhxd), 28 kg
<b>Norms:</b>	ICUMSA; O.I.M.L., Australian Standard K 157



The SACCHAROMAT® is operated fast and simply by a splash proofed foil keypad. The graphic LCD display may be configured individually for your measurement.



Flow-through tube with integrated temperature sensor and automatic identification of the tube length.

Quartz control plate with temperature sensor and automatic identification.

## The quartz wedge principle

The ORD (optical rotatory dispersion) of a quartz is identical with the ORD of a sucrose solution. The idea to compensate the rotation of a sucrose solution by the rotation of a quartz led to the development of the quartz wedge compensation principle.

This method, developed by SCHMIDT+HAENSCH, is unique until today and has established its position without competition in the sugar industry because of its high reliability. This polarimeter works with a quartz wedge, sliding in the optical light path. Polariser and analyser are fixed at an angle of 90°. The instrument measures the path of the quartz wedge, compensating the rotation of the sample. Instead of the angular encoder of a circle polarimeter, the SACCHAROMAT® works with a linear encoding system. As the quartz and the sample have an almost identical reaction to slight changes of the wavelength, these are having no impact on the results.

- High stability of the measured value for highly absorbing samples
- Long-term stability of the measured values without calibration

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