

Saccharomat® & Purity Analyser

Sugar Polarimeter & Sugar Purity Analyser



Saccharomat®

Sugar Polarimeter



Saccharomat® - Worldwide unique quartz-wedge compensated sugar polarimeter

The Saccharomat®, is the sugar polarimeter of highest precision based on the SCHMIDT+HAENSCH's patented principle of quartz wedge compensation and guarantees measurements without calibration during the lifetime of the instrument. Cost saving features of the Saccharomat® are its low maintenance requirements and extremely reliable performance over its entire long lifetime. As such, it is perfectly suitable for the controlling of frequently repeated processes, e.g. in the reception laboratories of sugar factories.

- The principle of the quartz wedge compensation guarantees a high stability of the measuring values even for highly absorbing (dark) samples
- Measurement of very dark samples after filtration with AutoFilt® without additional clarification with NIR - / NIRW2 models (infrared wavelength)
- Measurement of samples with optical density up to 3.6
- High compensation speed
- Long life time of the instrument combined with low maintenance costs, calibration free

Applications

The Saccharomat® of SCHMIDT+HAENSCH is in use 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 beet and cane processing.

The quartz wedge principle

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

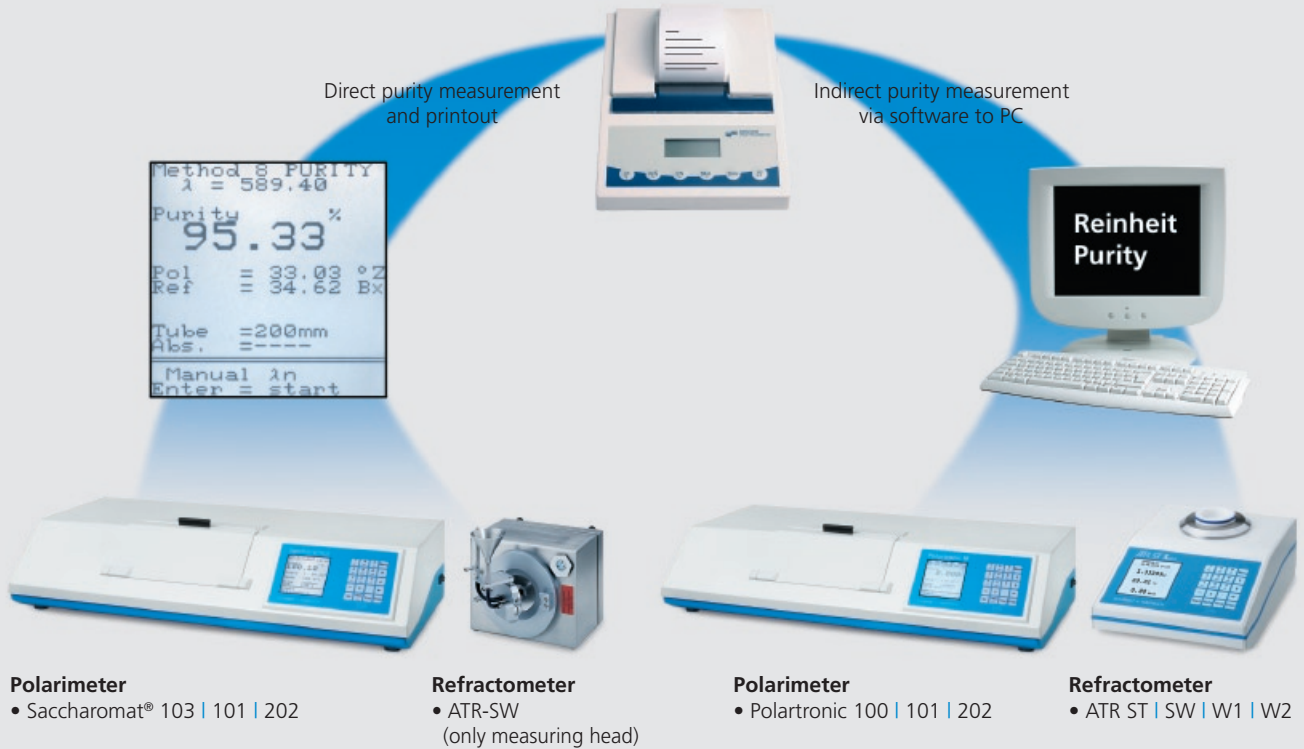
The Saccharomat® works with a quartz wedge, sliding in the optical light path. Polariser and analyser are fixed at an angle of 90°. The instrument measures the path of the quartz wedge, compensating the rotation of the sample. Instead of the angular encoder of a circle polarimeter, the Saccharomat® works with a linear encoding system. Since the quartz and the sample have an almost identical reaction to slight changes of the wavelength, these are having no impact on the results.

Technical Data

Measuring range:	-35 to +105°Z
Resolution:	0.01°Z
Precision:	± 0.02°Z
Light source / Lifetime:	LED / 50,000 h
Wavelengths:	Modell 103: 587 nm Modell 101: 882 nm Modell 202: 587 and 882 nm
Polarimeter tubes:	50 / 100 / 200 mm
Operating temperature:	+10°C to +40°C, autom. temp. compensation when using a temp.-tube
Measuring time:	≤ 4 sec over the entire measuring range
Display:	Graphics-LCD, 16 x 16 characters
Interfaces:	2x RS232, 1x parallel, 1x PS2, 1x USB (opt.)
Standards	ICUMSA, O.I.M.L., Australian Standard K 157

Purity Analyser

Sugar Purity Analyser



Purity Analyser

The determination of the purity of sugar cane and beet in the sugar industry can be achieved precisely and effectively using an automated laboratory analysing system, the Purity Analyser.

The modular structure of SCHMIDT+HAENSCH's instrument series permits the direct coupling of a ATR measuring head (refractometer) to a Saccharomat® (polarimeter). Combined with a common printer, it is possible to print all data relevant to the instrument and the measured values.

- Measurement of sugar concentration and indication in °Z and Brix, calculation of the % of purity of the sugar according to Schmitz-Table respectively the weighting method
- Temperature and Brix value are being corrected separately (applying a temperature tube)
- Automatic setting of ID Nos.
- Permanent indication of optical density
- Measurement without clarification using a NIR wavelength (we recommend the use of AutoFilt® as a support)
- Precision and reproducibility of the measured values in accordance with the high requirements of quality control and payment systems

Applications

Purity analysis of raw-, intermediate-, and final products of sugar cane and beet processing, reception control in pharmaceutical- and food industries.

Precision

Two classes of precision are possible:

Resolution:

N-series and ATR: 0.05°Z and 0.02 Bx
M-series/Saccharomat® and ATR: 0.01°Z and 0.01 Bx

Precision:

N-Serie und ATR: ± 0.05°Z and ± 0.04 Bx
M-series/Saccharomat® and ATR: ± 0.02°Z and ± 0.02 Bx

Aquisys®

Laboratory information management system LIMS



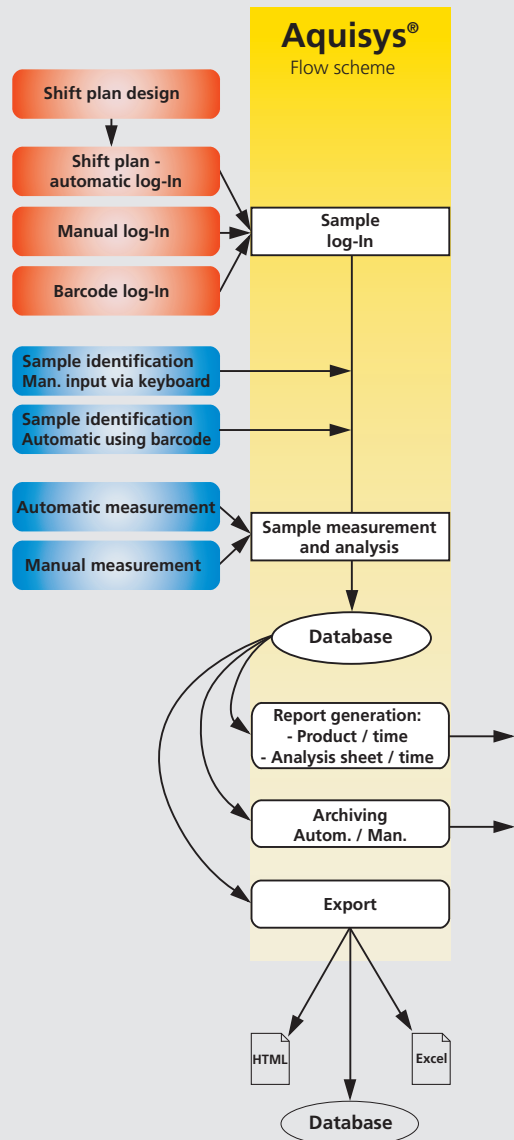
Aquisys®

Aquisys® is a database-based program for the collection of laboratory data. It is conceived as high-performance, safe LIMS (Laboratory information management system) and electronic laboratory book for small and middle-sized laboratories.

The user interface with its functionality similar to Excel facilitates learning the program substantially.

- Collecting data from up to 16 measuring instruments
- User-specific access, user administration
- Sample log-in (Sample identification)
- Providing user defined laboratory data sheets
- Archiving
- Reporting
- Shift plan for measurements
- Data export to other data base systems

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Subject to modification without notice
 Änderungen vorbehalten
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