# Polarimeters



## What is Polarimetry?

Certain substances, sugar solutions for example, are subject to a phenomenon known as the "rotation of polarization as a result of optical activity". The polarimeters manufactured by A. Krüss Optronic GmbH are measuring instruments which use polarizing filters to determine this rotation with pinpoint accuracy.

What exactly is "polarization"? When held against the light, a basic polarizing filter simply looks grey. Yet if two such filters are held in tandem, a position is revealed through which light cannot pass. Both filters have their own plane of transmission for the so-called polarization of light, and in the above-mentioned position these planes are vertical to each other.

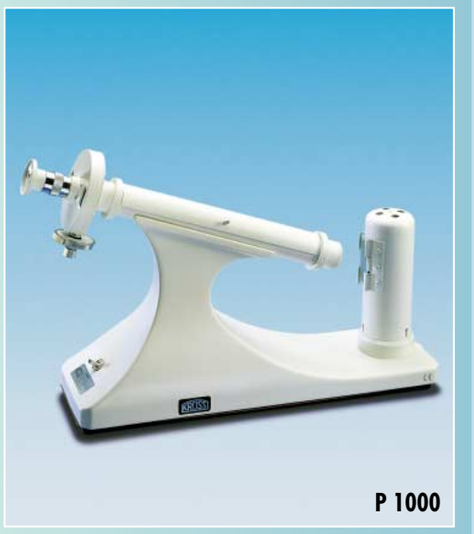
Substances subject to "optical activity" can rotate the polarization of light. If such a substance is positioned between two polarizing filters, a certain amount of light is admitted through the filter pair. The amount of light now becomes a measurement for the passage of light through the substance, for the concentration of the substance, as well as for certain constants specific to the substance.

P 3001

## P 3001 RS/3002 RS Automatic Digital Polarimeter

The automatic digital polarimeter measures optical rotation in degrees. It is easy to operate, with automatic detection and digital angle conversion. It will also measure samples with low transmittance. Accessories are the same as those for the P1000.

| Model | 3001 | 3002 |
|---|---|---|
| ▸ Measuring range: | ± 45° | ± 45° |
| ▸ Resolution: | 0.005° | 0.001° |
| ▸ Repeatability: | <0.01° | <0.004° |
| ▸ Balance speed: | 1°/sec | 1°/sec |
| ▸ Min. sample transmittance: | 10% | 1% |
| ▸ Light source: | Sodium vapor lamp (589 nm) | |
| ▸ Power supply: | 230 VAC, 50 Hz, 100 W | |
| ▸ Interface: | RS 232 | |



P 1000

## P 1000 Polarimeter

The sturdy metal stand accomodates tubes up to 200 mm long. Supplied with removable cover, analyzer, polarizer, and accessories.

- ▸ Measuring range: Two scales (0 - 180°)
- ▸ Glass tubes: 100 and 200 mm (220 mm available)
- ▸ Scale division: 1°
- ▸ Vernier reading: 0.05° (with nonius)
- ▸ Light source: Sodium vapor lamp (589 nm)

| **Accessories:** | **for P 1000, P 3001, P 3002** |
|---|---|
| P 100 | Polarimeter tube, 100 mm long |
| P 200 | Polarimeter tube, 200 mm long |
| P 300 | Spare sodium lamp |

**A. Krüss Optronic GmbH**
Alsterdorfer Straße 220 · 22297 Hamburg · Germany
Telefon +49 40 514 31 70 · Telefax +49 40 51 25 22
Internet: www.kruess.com · E-Mail: info@kruess.com