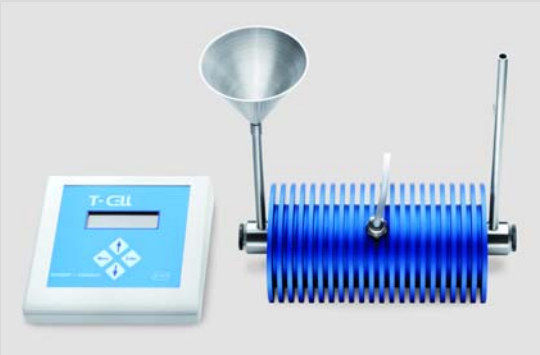
POLARIMETER TUBES

Schmidt+Haensch announced:

NEW Polarimeter Tubes temperature controlled by electronic Peltier-System

Highly accurate sample temperature adjustment without the need for an external water circulator!



Features:

- Accurate temperature control without external water circulator
- Large temperature range can be controlled (18°C – 60°)
- Fast cooling of warm samples in a few minutes
- Tube:
  - 100 mm path length
  - Single measurement
  - Normal volume
  - Made from stainless steel
- T-Cell splash prove protected IP65
- Controlled by separate electronic unit
- Automatic indication of tube length and thermal extension coefficient
- Can be used in all our digital polarimeters of Unipol L series
- T-Cell calibration kit for temperature validation and calibration

The optical activity of the sample, measured in angular degree, is a physical property of the solved matter and depends on the temperature as well as the sample itself, the concentration, the tube lengths and the wavelengths of the used light. The influence of temperature changes is specific for each material.

To be able to compare several measuring values, the reference temperature for polarimetric measurements is 20°C (or 25°C). For some substances the effects of temperature changes on the measured angle are well-known. One example are sucrose solutions. Most polarimeters have implemented the so-called sugar scale °Z, which includes a factor to compensate the influence of the temperature.

In case the instrument knows the sample temperature (by using temperature sensors), the polarimeter is able to calculate and indicate the concentration of the sucrose solution compensated to the reference temperature of 20°C.

For all other matters the customer should measure at the reference temperature of 20°C or he must accept a lower precision of the measuring value.

The most common way to cool or heat the sample is to connect the sample tube with an external water bath. In addition nowadays polarimeter tubes with integrated Peltier-elements are available. Schmidt+Haensch's new developed T-Cell is controlled by a separate electronic unit which has his own power supply. Temperatures are programmed and set by the electronic unit via 4 buttons on LCD screen.

Technical Data:

T-Cell	
Consists of T-Cell polarimeter tube and electronic unit	
T-Cell polarimeter tube	
Automatic electronic heating and cooling of the sample	
Temperature range:	18°C - 40°C
Temperature precision:	± 0.1°C
Temperature stability:	± 0.05°C
Time for ΔT = 10°C:	≤ 10 min
Tube length	100 mm
Sample volume	approx. 12 cm^3
Contact material (depending on the model)	Stainless steel, float glass
Protection class	IP65
T-Cell Electronic Unit	
Display	Two lines, illuminated backround
Power supply	100 -240 V, 20 VA