Polarimetry 2.5.02-00

What you can learn about ...

- ➔ Half-shade principle
- ➔ Optical rotatory power
- ➔ Optical activity
- ➔ Saccharimetry
- ➔ Specific rotation
- ➔ Reaction rate
- ➔ Weber-Fechner law

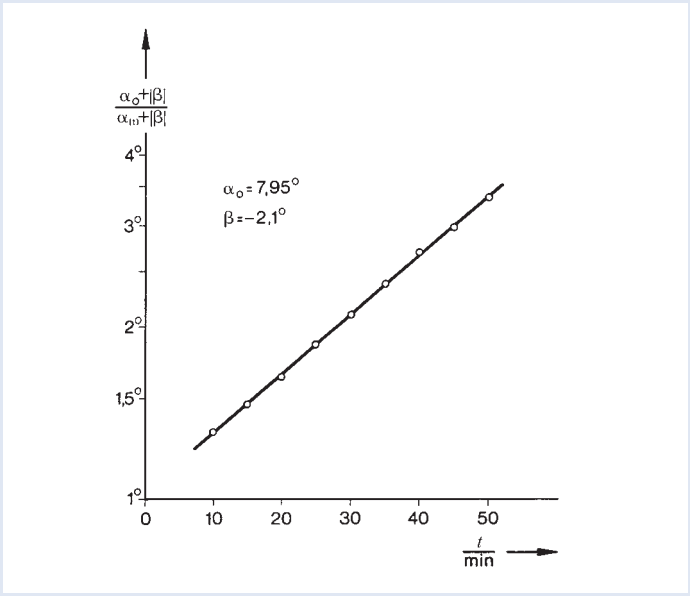
Principle:

The rotation of the plane of polarisation through a sugar solution measured with a half-shade penumbra polarimeter and the reaction rate constant for the inversion of cane sugar determined.

What you need:

Half-shade polarimeter, 230 V AC	35906.93	1
Immersion thermostat TC10	08492.93	1
Accessory set for TC10	08492.01	1
Bath for thermostat, Makrolon	08487.02	1
Stopwatch, digital, 1/100 s	03071.01	1
Crucible tongs, l = 200 mm, stainless steel	33600.00	1
Beaker, 250 ml, low form, plastic	36013.01	2
Graduated cylinder, 100 ml, plastic	36629.01	2
Graduated vessel, 1 l, with handle	36640.00	1
Funnel, plastic, d = 100 mm	36891.00	1
Spoon with spatula end, l = 180 mm, PA, wide	38833.00	1
Stirring rods, BORO 3.3, l = 300 mm, d = 8 mm	40485.06	1
Pipette, with rubber bulb, long	64821.00	1
D (+)-Sucrose, 100 g	30210.10	1
Hydrochloric acid 37 %, 1000 ml	30214.70	1
Water, distilled 5 l	31246.81	1
D(+)-Lactose, powder 100 g	31577.10	1
Balance LG 311, 4 beams	44007.31	1

Complete Equipment Set, Manual on CD-ROM included
Polarimetry P2250200



Semi-logarithmic plot of the measured values from cane sugar inversion.

Tasks:

1. To determine the specific rotation of cane sugar (sucrose) and lactose by measuring the rotation of various solutions of known concentration.
2. To determine the reaction rate constant when cane sugar is transformed into invert sugar.