

# Polarimeters

## Polarimeters

### Model D



Measures the optical rotation of optically active materials, such as sugar solutions, sugar in urine and glucose drip solutions. A two-part field is observed in the lower telescope. Balance is first achieved by rotating the analyser circle until both halves of the field are of equal intensity. The introduction of an optically active sample disturbs the balance, which is restored by rotating the circle through an angle corresponding to the rotation caused by the sample. The D2 Polarimeter includes a 100mm diameter glass circle with a 360° angular scale with 1° sub-divisions and an International Sugar Scale of 30° to 130° ISS (with 1 sub-division). A divided drum enables readings to 0.05° ISS and by estimation to 0.02° ISS.

One 200mm tube is supplied (although tubes up to 220mm long can be accepted), and a variable half-shadow polariser. A sodium light source must be used.

Product No	Description
11338/01	Model D Polarimeter
11338/11	Free standing Sodium lamp outfit

### Automatic Digital Polarimeters

The ADP410 is a dual scale, fully automatic polarimeter designed for use in many applications that require measurement of optical rotation.

The instrument is housed in a rugged chemical resistant case making it suitable for use in factory environments as well as in the laboratory. Standard, jacketed and flow type tubes may be used, possibly requiring the use of specially suited slotted lids.

Operation is very simple by way of four graphically identified push buttons including scale and compensation selection, zero calibration and the display may be printed via an RS232 interface.

Temperature compensation can be achieved from a single sensor, which can measure either the temperature within the sample chamber or, when placed in the centre-filling arm of the measurement tube, the temperature of the actual sample.

The sample reading value and optical density are alternately displayed by repeatedly pressing the READ key. The instrument can be checked and calibrated using the quartz control plates by accessing the span facility in the setup menu. If a sample is too dark, the instrument will display an error message.

An LED and narrow band interference filter provides illumination of the sample and requires no maintenance.

### Technical Data

Selectable Scale	-90° to +90° Angular -225° to +225° ISS (°Z)
Resolution	0.01°A (0.01°Z)
Accuracy	±0.02°A (±0.05°Z)
Light source	LED with 589 nm interference filter
Beam diameter	4 mm (approx) through length of chamber
Interfaces	Serial RS 232 Parallel Centronics Temperature probe

Product No	Description
11339/01	Automatic Digital Polarimeter

