

ADP440 Polarimeter

**High Accuracy Polarimeter
for Sugar, Food, Chemical and
Pharmaceutical Applications**



Pharmaceuticals

Cosmetics

Chemicals

Flavours

Fragrances

Essences

Sugars



**Bellingham
+ Stanley**



ADP440 Polarimeter

The ADP440 is single wavelength, high accuracy polarimeter suitable for use in many applications and is especially suited for use in pharmaceutical laboratories where compliance with European Pharmacopoeia¹ is required.

New optics featuring a 'no maintenance' yellow LED and interference filter together with a photodiode detector allows reading of samples of up to 3.0 OD.

The instrument has both angular and sugar scales (ISS) and can be programmed with user scales as well as industry standard methods for displaying concentration and specific rotation directly.

When used in the sugar industry, the ADP440 may also form the central hub of a purity system, providing the measurement of a Saccharimeter. In the 'purity mode' the instrument will calculate and display 'sugar purity' with Brix values being input automatically from an RFM² refractometer or via the simple keypad. For rapid measurements, funnel and flow through cells are available and require the use of specially suited slotted lids.

Data handling is in accordance with GLP providing a record of measurement date, time, batch and operator numbers. A calibration record is also available to be displayed or printed. Data handling may also be configured in accordance with the technical requirements of FDA regulation – 21CFR Part 11.

Operation is very simple by way of four push buttons including scale and compensation selection, zero calibration and the displaying of optical density and temperature. On-screen menus in English, French, Spanish or German are selectable.

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 instrument can be checked and calibrated using a quartz control plate by accessing the span facility in the setup menu. If a sample is too dark, the instrument will display an error message.

1. Minimum requirement of EP/BP/JP/USP. 21CFR Part II

2. RFM900/RFM300+/RFM700 and earlier RFM340/RFM800 models only

Features

- Multiple scales
- Temperature display
- Optical density display
- Temperature compensation
- LED/Interference filter
- Parallel printer port
- RS232 x 2 (refractometer/PC/barcode)
- Barcode reader
- High resolution LCD display
- Conforms to USP/EP/BP/JP

Software Features

- GLP software (date/time/batch)
- 21CFR Part 11 audit trail
- Calibration audit trail
- Purity methods (Saccharimeter)
- Specific rotation methods
- Statistics

Optical Accessories

- Funnel & flow tubes
- Low volume tubes
- Water-jacketed tubes
- Waterbaths
- Slotted lids
- Quartz control plates

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Specifications	Angular	ISS (° Z)
Range	-355 to + 355 selectable	-225 to +225
Resolution	0.01/0.001	0.01/0.001
Reproducibility	0.002	0.005
Accuracy	±0.01	±0.03

Light Source	LED/Interference filter (589nm)
Beam Diameter	4 mm
Tube Length	20 to 220 mm
Reading Time	4 – 30 seconds (selectable)
Temperature	5-40 °C
Temperature Compensation	None, sugar, quartz, user defined
Optical Density Range	0.0 to 3.0 OD
Interfaces	2 x RS232, parallel printer port
Power Supply	External 90-250V~, 50-60 Hz. Supplied with instrument

Order Code	Description
37-40	ADP440 digital polarimeter supplied with one centre filling tube (200mm), instruction manual and certificate of conformity.

Bellingham + Stanley Ltd. pursue a policy of continuous product development and improvement and, as such, information given on this Data Sheet may be updated or withdrawn without notice.



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