LABORATORY REFRACTOMETER FOR CONCENTRATION ANALYSIS

he LR-01 refractometer with microprocessor with its renowned sturdiness and precision is Maselli's technological answer in the field of laboratory analysis. This instrument detects the refractive index, converts it into a concentration-measurement unit and displays the information on a digital LCD display with back lighting. The analysis section has been developed using state of the art technology which guarantees great accuracy and reliability (synthetic sapphire prism, LED light source, optical transducer with CCD). The use of a microprocessor, apart

from optimizing analysis methodology, means the system can be set up with a packet of diverse functions:

- 10 measurement parameters (between pre-set and configuration options)
- automatic calibration
- interface with printer and PC
- vocal synthesizer (four languages)
- singular or continual analysis.

The polyester waterproof keyboard and the airtight stainless steel structure guarantee perfect use of the instrument 'on site'. With the installation of an appropriate flow chamber, this unit can even be used with volatile and corrosive products. Its main fields of application are within industrial laboratories in the food and drink, chemicalpharmaceutical, petrochemical and textile sectors.



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GENERAL CHARACTERISTICS

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Measurement limits: 1.3330...1.5177 nD (0...90 Brix)

Accuracy: ±0.00004 nD (±0.03 Brix)

Measurement scales:

(10 parameter)

- nD

- Brix "Brix" Scale (refers to the nD/Brix ICUMSA 1974 conversion tables)
- 3 Brix Scale with Zero and Span value personalization options
- HFCS42 special iso-glucose scale
- HFCS55 special iso-glucose scale
- 3 "USER" totally configurable from keypad

Temperature Compensation:

- Automatic between 5 °C...45 °C (41 °F...113 °F)
- For USER field scales, compensation refers to value setting applied

Interfaces:

- RS232 to a PC
- CENTRONIX for printer

Inputs/outputs:

- N° 1 input for measurement "external START"
- N° 1 multi-function output optically configurable from the keyboard with contact rating of 24V/2A

Supply:

- External power supplier (supplied): AC 115/230V ±10% 50...60Hz 7VA

Water supply:

Water for thermostat control Maximum pressure 1 bar (14.5 psi) Inlet/outlet connection by means of hose fitting Inserts for reinforced hoses with ID of 10 mm

CONSTRUCTION CHARACTERISTICS

Measurement prism: In synthetic sapphire

Light source: High efficiency LED electronically compensated

Element of refractometric measurement:

High resolution CCD Element of temperature measurement: Internal Pt1000 (option for connection to Pt1000 external temperature sensor)

Controls:

Keypad in scratch-proof polyester

Display:

Backlit alphanumeric LCD 2x16 character LCD display

Language:

Voice synthesizer in 4 languages (English, French, Italian, Spanish)

Execution:

- Shell in 304 AISI stainless steel - Protection IP65 (EN60529)

Weight:

4.8 kg (10.5 lb)

Analysis bowl:

In 316 AISI stainless steel with internal water circulation cooling circuit

Sample volume:

0.5 cc min.

Materials in contact with the process fluid:

- 316 AISI stainless steel
- Synthetic sapphire
- Silicone coated fibreglass fabric
- (others on request)

Dehumidification:

The optical section of the unit is dehumidified by means of a Molecular Sieve desiccant cartridge

ACCESSORIES

- Sampling system comprising
- Flow Cell and Peristaltic Pump
- Graphic or continuous reel printer





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