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with the next generation...

OSMOMAT 3000

freezing point osmometer

TOUCH IT user guidance

QM assistance

barcode and USB connectivity

gonotec

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Fields of Application of the OSMOMAT® 3000

The GONOTEC® Single-Sample Freezing Point Osmometer is especially designed for routine measurements in the medical field and is also very suitable for measurements in research and industry.

The OSMOMAT 3000 determines the total osmolality of aqueous solutions. The instrument requires very small sample volumes and can thus be applied for extreme measuring tasks. Its rapidity allows serial measurements in a very short time.

Simple Handling and Documentation

- The OSMOMAT 3000 Osmometer can be controlled easily and comfortably via a touch screen display.
- Step by step user guidance through all measurement functions.
- QM assistance for the laboratory supervisor.
- 2 or 3 point calibration.
- The results are sent to the optional built-in printer in document-ready format.
- For data transfer to a PC it can be connected via USB or RS232.
- Collection of sample data via an optional barcode reader.
- The robust design of the measurement equipment makes the OSMOMAT 3000 easy to handle and maintain.
- Choice of language: German/English.
- Automatic calibration by using Gonotec calibration standards.

The Measuring Technique

The total osmolality of aqueous solutions is determined by comparative measurements of the freezing points of pure water and of solutions. Whereas water has a freezing point of 0 °C, a solution with saline concentration of 1 Osmol/kg has a freezing point of -1.858 °C.

OSMOMAT 3000 can be used in:

- General Medicine
- Routine and Research
- Forensic Medicine
- Electron Microscopy
- Physiology
- Clinical Laboratories
- Intensive care Laboratories
- Paediatrics
- Gynaecology
- In-vitro Fertilization
- Urology
- Nephrology
- Haemodialysis/Hemofiltration
- Veterinary Medicine
- Botany
- Pharmacy
- Dispensaries
- etc.

Specification

Standard Instrument

Display	5.7" LCD - touch screen
Initiation of the cryst. process	By means of the tip of a stainless steel needle covered with ice crystals which is controlled automatically
Cooling	By means of two separate peltier cooling systems with heat dissipation by air
Lower Cooling	Electronic temperature regulation, deviation < ±0.1 °C
Sample Volume	50 µl / single sample
Test Time	About one minute
Resolution	1 mOsmol/kg H_2O
Units	mOsmol/kg H_2O
Range	0 up to 3000 mOsmol/kg H_2O
Reproducibility	≤ ±2 digit [0.. 400] mOsmol/kg H_2O ≤ ±0.5% [400.. 1500] mOsmol/kg H_2O ≤ ±1.0% [1500.. 3000] mOsmol/kg H_2O
Linearity	Less than ±1% in calibrated range
Output Ports	DTE RS-232, USB
Ambient Temp.	10 °C to 35 °C
Power supply	100 - 240V, 50/60 Hz, 80 VA
Dimensions	220 x 205 x 360 mm (D x W x H)
Weight	approx. 6,4 kg

Option D

Printer	Graphical dot matrix-printer date, time and sample information on each measurement
Digits	≥ 16 characters per row
Paper	Normal paper, 43 mm wide
Print modes	Single printing, batch printing
Ink Ribbon	Endless ink ribbon cassette, exchangeable
ERROR	Printed in plain text

Option BC

Digital Input	Barcode reader included.

Option M

Sample Volume	15 µl
Reproducibility	≤ ±2.0% [0..3000] mOsmol/kg H_2O

Technical changes reserved!

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