Get in touch with the next generation...

MEDICA®
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OSMOMAT 3000

freezing point osmometer

TOUCH IT

- user guidance
- QM assistance
- barcode and USB connectivity

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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.
- The last result remains available for reading even after automatic switching to stand-by mode.
- The robust design of the measurement equipment makes the OSMOMAT 3000 easy to handle and maintain.
- Choice of language.
- 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.

OSMOMAT 3000 Specifications

Standard Instrument

Display	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 system	Electronic temperature regulation, deviation < ±0.1 °C
Sample Volume	50 µl
Test Time	60 seconds
Sample Capacity	Single Sample
Units	mOsmol/kg H_2O
Resolution	1 mOsmol/kg H_2O
Range	0 up to 3000 mOsmol/kg H_2O
Communications	DTE RS-232 serial port, USB and barcode scanner port
Linearity	Less than ±1% from a straight line between 0 and approx. 3000 mOsmol/kg H_2O
Reproducibility	≤ ±2 digit [0.. 400] mOsmol/kg H_2O ≤ ±0.5% [400.. 3000] mOsmol/kg H_2O
Ambient temperature	10 °C to 35 °C
Power supply	100 - 240V, 50/60 Hz, 45 VA
Dimensions	220 x 205 x 360 mm
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 M

(Special version for 15 µl sample volume)

Reproducibility	≤ ±2.0% [0..3000] mOsmol/kg H_2O

Subject to technical modifications!

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VER 0.9 11/08/2012