

OSM-9, Osmometer

The OSM-9 is a compact micro processor controlled analyzer for easy and precise osmolality tests in samples of serum, plasma, urine or other body fluids.

OSM-9 model has hi-tech user interface:

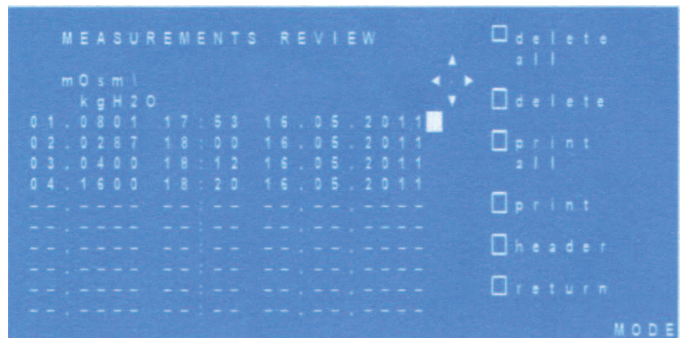
- Observation of the sample freezing process with immediate information regards result correctness.
- Available measurement results history with printout of the single result or of many chosen measurement results.
- Active result printout description.
- Service panel with service tests.
- Displaying in Polish/English/German/French.
- Date and time setting.
- The microprocessor control and built in electronic components with high long term stability make the OSM-9 an analyzer of easy application & reliable results.

Whole blood, plasma or serum (Sosm):

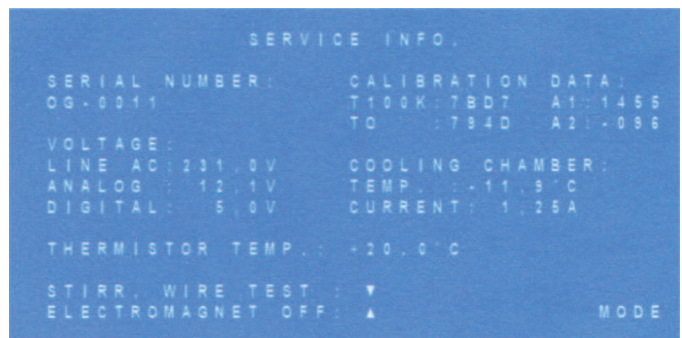
- Monitor hypo and hypernatremic states.
- Monitor effectiveness of fluid therapy such as 5% dextrose solutions.
- Detect and monitor overhydration and dehydration.
- Diagnose and monitor diabetics, especially diabetichyperosmolal non-ketonic coma (DHNC).
- Lactic-acid monitoring in shock-trauma patients.
- Reaffirm BUN, glucose and electrolyte value.

Urine:

- Detection of the onset of acute renal disease.
- Monitor antidiuretic hormone (ADH) activity.
- Monitor effectiveness of diuretic therapy especially Mannitol.
- Monitor polyuric states.
- Detect diabetes insipidus.

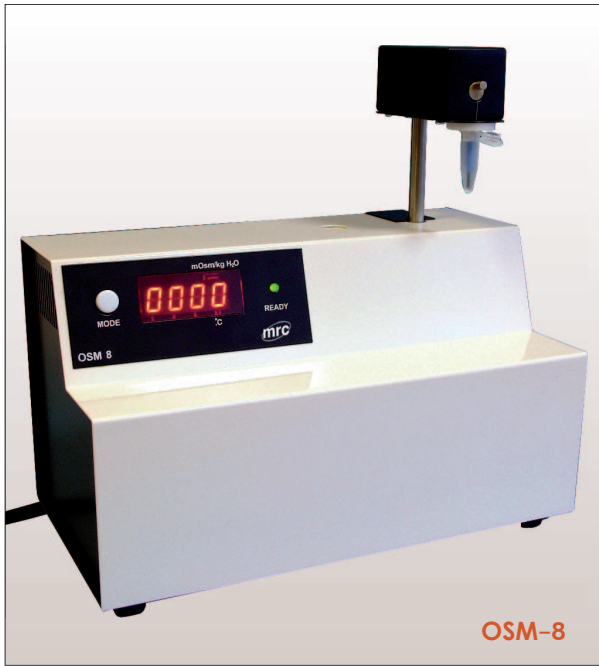


Simple operation: The OSM-9 makes the running of the osmolality test very easy. 100µl of the sample are pipetted into a sample tube. The sample tube is attached to the measuring head. The measuring head is pushed down into the cooling chamber. Now the measuring cycle starts automatically. When the measuring is terminated, the measuring head returns to its upper position again, and the result is digitally displayed in mOsm/kgH2O.



- 1-point calibration – the 1-point-calibration requires distilled water only, and is one of the most practical features of this analyzer. The calibration values are automatically calculated and stored in the microprocessor memory.
- Automatic work – the OSM-9 needs only a sample.
- The microprocessor control and built in electronic components with high long term stability.
- Ready to work – ca. 5 min; short measuring time – 1.5 min
- High precision (± 0,5%) and reproducibility (better than 0,5%)

Model	OSM-9
1-point calibration	0 mOsm/kgH2O
Cooling	thermoelectric (Peltier effect)
Sample volume	100 µl
Measuring range	0=2000 mOsm/kgH2O
Resolution	1 mOsm/kgH2O
Precision	± 0.5%
Reproducibility	better then 0.5%



OSM-8

OSM-8, Osmometer

The freezing-point microprocessor-controlled one-point calibration instrument featuring a fully automated measuring process determining the osmolality of body fluids such as urine, serum and other biological fluids. Unique one point calibration using distilled water, saves time and expenses. Automatic error identification and automatic function control are outstanding features of this instrument.

Features:

- Easy sample handling in 1.5ml tubes.
- Bench space saving design.
- One-point-calibration.
- Automatic measuring procedure with error detection.
- The sample is cooled to below its freezing point by means of an air-cooled thermoelectric Peltier cascade.
- Series communication for printer RS232.
- The measuring result is displayed in digital form to four places in mOsm/kg H₂O.
- Sample volume 100µl, measuring time 90 sec.
- Measuring range 0 to 2000 mOsm/kg H₂O, standard deviation ±1%.

Whole blood, plasma or serum (Sosm):

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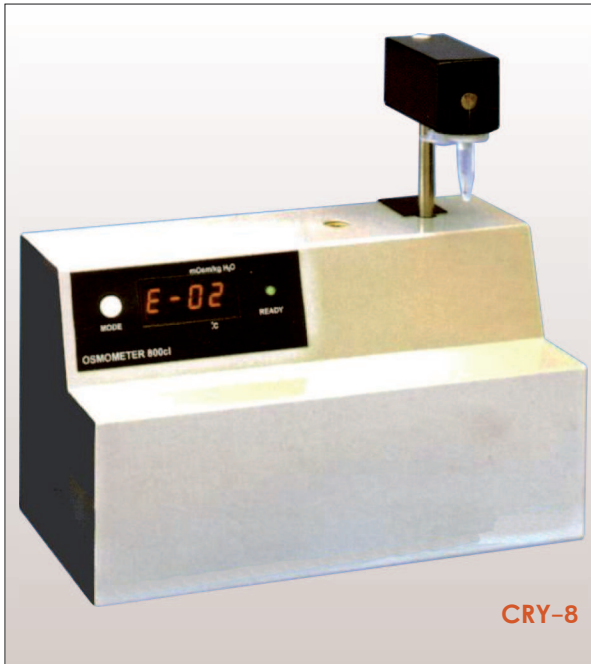
Model	OSM-8
sample volume	0.1 ml
measuring range	0-2000 mOsm/kgH ₂ O
accuracy	±1 mOsm/kgH ₂ O ±0.4%
precision	±1 mOsm/kgH ₂ O ±0.4%
stability	2 mOsm/kg H ₂ O/8h
measuring time	ca. 90s
dimensions	300x200x170mm
weight	6.25kg

The instrument is easy to be operate. After be-ing placed into the measuring vessel the sample of biological fluid is pushed onto the thermistor. By pressing down the measuring head the fluid sample is introduced into the cooling section. The sample is than continuously cooled down (Peltier-effect) below its freezing point. At defined supercooling temperature the crystallisation process is initiated by the stirrer. The liberated heat of crystallisation causes rising the temperature of ice-liquid mixture.

The max temperature value depends on the sample osmolality. The temperature is detected and after calculations the result is displayed directly in mOsm/kgH₂O.

Accessories:

150-1-000010	Sample tubes 1box=1000pcs
150-1-000011	Standard Solution 400mOsm/KgH ₂ O
150-1-000012	Standard Solution 800mOsm/KgH ₂ O



Features and Benefits:

- **Freezing Point Analyser for Milk**

The CRY-8 is a modern digital analyser for the accurate determination of the freezing point temperature in samples of raw milk or milk products (skimmed, pasteurised or UHT-milk).

The most objective indicator for the degree of falsification of milk by additional water is the raising of the freezing point temperature from $> -0.512\text{ }^{\circ}\text{C}$. The CRY-8 complies fully with the international standard ISO 5764/2002(E), IDF 108/2002(E) "Milk" - Determination of Freezing Point - Thermistor Cryoscope Method (Reference Method) and Annex C without the necessity to correct the results to the reference method.

The analyser measures temperatures in the range from below $-0.512\text{ }^{\circ}\text{C}$ (pure milk) to $-0.527\text{ }^{\circ}\text{C}$ in increments of $0.001\text{ }^{\circ}\text{C}$.

- **Peltier Effect**

The measuring principle is the freezing point detection of super cooled liquids based on the Peltier Effect. On the cold side of a Peltier element the milk samples are cooled down below the freezing point in the range 0 to $-7\text{ }^{\circ}\text{C}$.

- **1-Point Calibration**

One-point calibration –the instrument requires for calibration only one distillation water sample. Measurement corrections are done automatically & entered

CRY-8, Cryoscope

POINT ONLY. In comparison with this, competitive analysers do need 2 or 3 different calibration points. Once the CRY-8 is calibrated, the CALIBRATION REMAINS STABLE the whole day AS LONG AS THE INSTRUMENT STAYS SWITCHED ON.

- **Aqua Dest - Calibration**

The CRY-8 does not need expensive calibration solutions except distilled water for the zero point. These features, 1-POINT CALIBRATION and AQUA DEST-CALIBRATION ARE UNIQUE in the market and they CONTRIBUTE TO SAVING LABOR TIME AND COSTS FOR PURCHASE and STORAGE OF EXPENSIVE CALIBRATION STANDARDS.

- **100µl Sample Volume & disposable measuring vessel**

Precise measuring results from only $100\mu\text{l}$ sample make the CRY-8 disposable measuring vessels not require washing and sterilisation.

- **Easy Operation**

After the samples in 1.5ml tubes are inserted into the measuring position the instrument PERFORMS AUTOMATICALLY THE MEASURING PROCEDURE. FUNCTION CONTROL and ERROR IDENTIFICATION are also automatically done by the instrument. High accuracy ($\pm 0.002\text{ }^{\circ}\text{C}$) and repeatability ($\pm 0.002\text{ }^{\circ}\text{C}$) of results. Short measuring time ca 1.5 min. Digitally readout of temperature $^{\circ}\text{C}$ and $\% \text{H}_2\text{O}$ with printout. The printer can be adapted via RS 232 data port.

- **Simple Installation**

The CRY-8 is air cooled and does not need any connection to cooling water.

- **Robust Housing**

The sheet metal housing with epoxy lacquer paint ensures UTMOST MECHANICAL and CHEMICAL RESISTANCE to the laboratory environment.

- **Small Dimensions**

Small instrument weight and dimensions, big resistance to vibrations and hard working conditions