Osmo PRO

Multi-Sample Micro-Osmometer

Explore the future of osmometry for clinical labs.

ADVANCED
INSTRUMENTS

The OsmoPRO® advantage.

There is lot to get excited about with the OsmoPRO Multi-Sample Micro-Osmometer from Advanced Instruments. OsmoPRO is ideally suited for mid- to high-volume clinical laboratories who need to free up resources for other testing needs. It has the built-in flexibility, automation, and ease-of-use that allows users to simply load samples and walk away while the testing is completed.

Easy to use With total touchscreen operation and an intuitive user interface, OsmoPRO provides world-class performance in a user-friendly package.

Fast, accurate results With a 90 second test time and a small 20 µL sample volume, OsmoPRO provides rapid and precise test results using the industry-preferred freezing point depression method.

Improve efficiency and productivity Compared to single sample instruments, OsmoPRO allows the user to load multiple samples or controls, start the testing, and walk away. This translates to labor savings by allowing users more time for other laboratory tasks.

Versatile sample processing OsmoPRO is ideally suited to analyze body fluids including but not limited to blood, serum, plasma, urine, and stool.

Proven reliability OsmoPRO incorporates more than 60 years of applied technology and expertise in the field of freezing point osmometry.

Why osmolality determination matters.

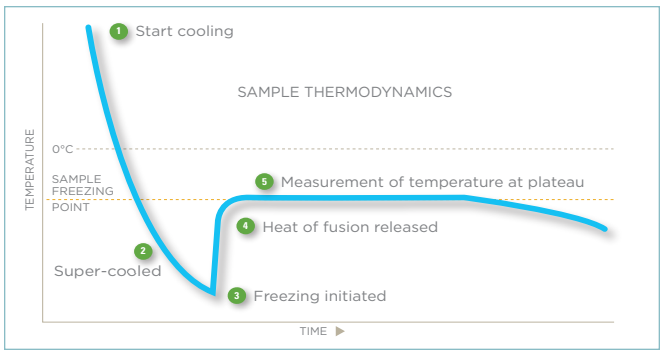
Osmolality is a fundamental measurement of the total solute concentration of body fluids including whole blood, serum, plasma, urine, feces, sweat, and tissue homogenate, and it is directly related to osmotic pressure. Osmotic pressure is of vital importance in biology as it relates to fluid balance, nutrient transfer, and waste removal processes in cellular organisms.

The value of osmolality testing in clinical laboratories.

Osmolality is a valuable clinical tool used in the diagnosis and treatment of patients. It is a quick and effective test to help evaluate the body's water balance or its ability to produce and concentrate urine, investigate low sodium levels (hyponatremia), detect the presence of toxins in the body, and monitor osmotically active drug therapies such as mannitol, used to treat cerebral edema. It can also help monitor the effectiveness of a treatment for a condition found to be adversely affecting a person's osmolality.

Why freezing point depression is the preferred method.

There are many methods for measuring concentration of solutions including: specific gravity, refractive index, and conductivity. Freezing point osmolality, however, is the only method which is truly independent from the size, shape, and other physical characteristics of the liquid solution. This is why freezing point depression is the industry-preferred solution and the gold standard in clinical laboratories around the world.



Theory of freezing point depression for osmolality determination.

Advanced Instruments' osmometers utilize the industry preferred freezing point depression method to determine the osmolality of body fluids. When solutes (particles) are dissolved in a solvent (water), the freezing point of the solution is lowered compared to that of the solvent alone. As more solute is added, the freezing point decreases further. Therefore, by precisely measuring the freezing point of the solution, the osmolality (i.e. concentration) can be determined. Freezing point osmometry can ascertain volatiles in solutions such as CO_2, ammonia, and alcohol unlike vapor pressure osmometry.

The industry standard for osmometers. Worldwide.

Onboard printer

For easy printout and archiving of test results

Touchscreen user interface

With a menu-driven operating system, intuitive software control, and multi-language capability, OsmoPRO is a snap to operate

20-Position turntable

Makes sample loading easy, and provides the ability to process multiple batch samples unattended

Precision sample cups

Requires only a small 20 µL sample volume ideal for sample-limited fluids including pediatric specimens

Integrated 2-D barcode scanner

With proximity sensor, aids with positive sample identification and reduces transcription errors

Ethernet and multiple USB ports

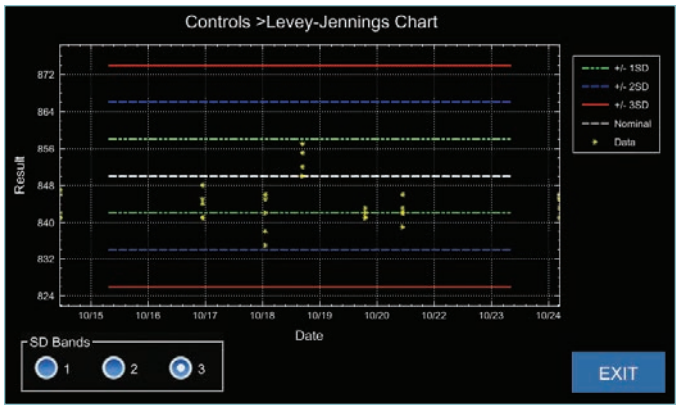
For enhanced data management, connectivity, and easy export of data

Simple. Intuitive. Efficient.

Precision. Reliability. Performance.

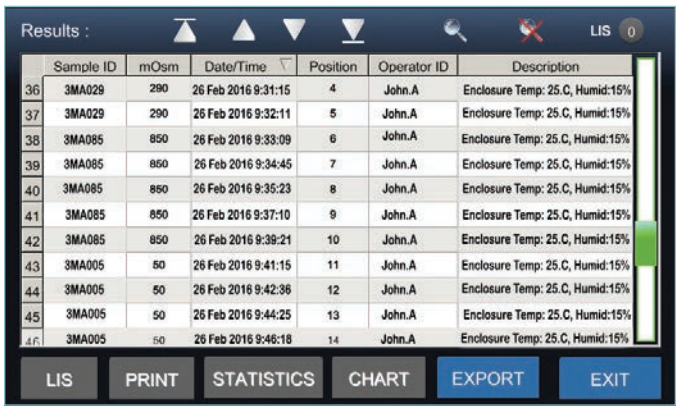
Flexibility in workflow.

- Sample carousel can be removed to load your samples offline, or samples can be loaded directly onto the carousel mounted to the system
- Load More feature allows the user to add STAT samples after testing has started
- Intuitive software control features adapt to the test workflow that best suits your laboratory



Built-in quality control.

- Onboard Levey-Jennings control charts for statistical monitoring of daily QC
- Ability to set custom range limits for QC samples
- System allows users to determine system action limits for out of range QC results



Enhanced data management capabilities.

- Enables laboratories to comply with HIPAA regulations
- Ability to link sample ID and operator with test results for traceability
- Supervisor mode with password protection and system lockout features
- Last 1,000 test records stored
- Easy export of data to USB device or Laboratory Information System (LIS)
- Ability to reprint or export selected test results in memory
- Onboard statistics (Mean, SD, CV) for selected test results
- Integrated search functionality provides easy retrieval of test results

Parts and supplies

Part number	Description
Instrument	
OSMOPRO	OsmoPRO Multi-Sample Micro-Osmometer
Osmometer calibration standards and reference solutions	
3MA005	50 mOsm calibration standard, 10x2 mL
3MA085	850 mOsm calibration standard, 10x2 mL
3MA200	2000 mOsm calibration standard, 10x2 mL
3LA028	Osmolality linearity set, 5x2x5 mL
3MA029	Clinitrol™ 290 reference solution, 10x2 mL
Osmometer control solutions	
3MA028	Protinol™ protein-based serum control (3-Level, 3 mL vials)
3LA085	Renol™ urine osmolality control (2-Level, 3 mL vials)
Osmometer supplies and accessories	
202825	Disposable sample tubes, box 500
202840	Probe wiper disks, box 50
240820	20 µL fixed volume pipette
800097	Pipette tips (960 pieces)
FLA835	Thermal printer paper, 5/pkg

Optimal performance requires quality test supplies.
Advanced Instruments supplies a full line of calibration standards, ControLine™ products and supplies to ensure optimal system performance and accurate test results.

OsmoPRO Multi-Sample Micro-Osmometer specifications[1]

Specimen type Body fluids

Sample volume 20 µL

Test time 90 seconds

Sample capacity Up to 20 samples

Units mOsm/kg H_2O

Resolution 1 mOsm/kg H_2O

Range 0 to 2000 mOsm/kg H_2O

Accuracy[2]
0–400 mOsm/kg H_2O: ≤3 mOsm/kg H_2O from nominal value (1 SD)
400–2000 mOsm /kg H_2O: ≤0.75% from nominal value (1 SD)

Precision[2]
(within run) 0–400 mOsm: standard deviation ≤ 3 mOsm/kg H_2O
400–2000 mOsm: CV ≤ 0.75%

Temperature effects[3] Less than 1 mOsm/kg H_2O per 5°C (9°F) ambient temperature change

Communications Onboard printer, integrated 2D-barcode scanner, USB 2.0 Type A (3), USB 2.0 Type B (1), Ethernet Port (1)

Supported languages Simple Chinese, Czech, Danish, English, French, German, Greek, Italian, Japanese, Korean, Portuguese, Russian, Slovak, Spanish, Swedish, Turkish

Storage temperature -40°C to +45°C (-40°F to +113°F)

Electrical voltage 100 to 240 VAC (50/60 Hz)

Power consumption 60 Watts

Dimensions (D x W x H) (37 cm x 25 cm x 44 cm) (14" x 10" x 17.5")

Net weight 13.2 kg (29 lbs.)

Shipping weight 19.1 kg (42 lbs.)

Warranty One-year limited warranty on workmanship and parts

CE IVD Intertek 98214 RoHS

The quality management system governing the manufacturing of this product is ISO 13485 registered.

[1]Subject to change

[2]Performance at Reference Conditions: 20°C to 25°C (68°F to 77°F); 40 to 60% relative humidity

[3]Operating Conditions: Temperature 18°C to 35°C (64°F to 95°F); 30 to 80% relative humidity (non-condensing)

ADVANCED INSTRUMENTS

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Hot-Line™ Technical Service Advanced Instruments provides 24/7 comprehensive customer service and technical support.

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