Advanced
3250 Single-Sample Osmometer

The premier research-oriented, single-sample freezing point osmometer designed for fast, accurate sample analysis and versatile operation



www.aicompanies.com

The Advanced™ **Model 3250** is a single-sample osmometer designed to provide fast, accurate test results using a 200-250 µL sample. It combines proven freezing point technology with the versatility of advanced sample processing capabilities in an osmometer that is both simple to operate and easy to maintain. It is ideally suited for routine osmolality testing in the clinical laboratory, and also for research applications in pharmaceutical, academic, and industrial laboratory settings.







Optimized for Research

The Model 3250 offers the widest measurement range of any osmometer. In addition, the system can be optimized to achieve superior test results for the broadest range of sample types and complex aqueous mixtures, making it an ideal tool for the research laboratory setting.

Providing-Industry Leading Capabilities for Osmolality Testing

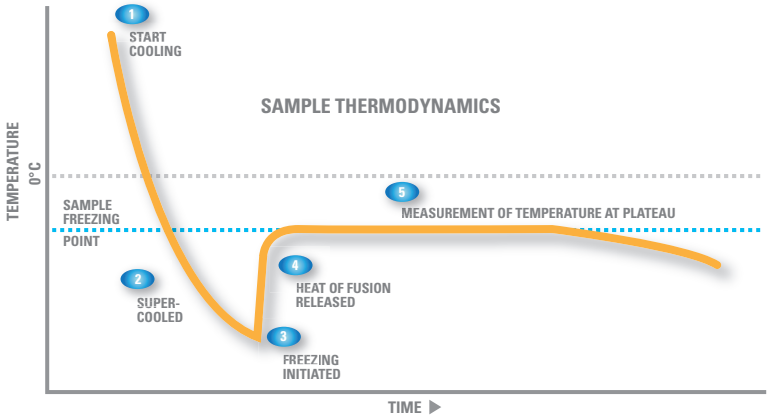
ADVANCED 3250 OSMOMETER FEATURES AND BENEFITS

- **Freezing point technology** – The industry-preferred method for determining sample concentration because it accounts for ALL solutes in solution
- **Fast and reliable test results** – With a 2-minute test time, the 3250 can quickly process samples and improve laboratory productivity with industry-leading accuracy and precision
- **Versatile sample processing** – The 3250's test parameters can be optimized based on the sample type, making it ideal for analyzing complex aqueous mixtures including blood, serum, plasma, urine, cell culture, drug formulations, and many other nonbiological sample types
- **Easy to use** – With features including microprocessor control, a menu-driven display with push-button design, automatic calibration, and onboard statistical analysis, the 3250 combines world-class performance in a user-friendly package
- **Flexible reporting options** – The 3250 provides an onboard printer, optional bar code scanner, internal memory storage of test results, and the ability to export data to a PC
- **Proven reliability** – The 3250 system incorporates over 50 years of applied technology and expertise in the field of osmometry and is ideal for laboratories seeking greater control, minimal downtime, and higher productivity

APPLICATIONS

- Clinical diagnostics, emergency and sports medicine
- Pharmaceutical research and development
- Biopharmaceutical monitoring and process control
- Academic and medical research
- Industrial monitoring and quality control
- Environmental research and monitoring

Theory of Freezing Point Depression for Osmolality Determination



Advanced osmometers utilize the industry-preferred freezing point depression method to determine the osmolality of an aqueous-based solution. When a solute (particles) is dissolved in a solvent (water), the freezing point of that 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.

Advanced 3250 Single-Sample Osmometer

ABOUT ADVANCED INSTRUMENTS

Advanced Instruments is a leading supplier of instrumentation for clinical, pharmaceutical, biotechnology, microbiology and food laboratories around the world. Quality, reliability, service and support have been the company's guiding principles since our founding in 1955. Our innovative application of technology helps healthcare organizations improve the quality of care and industrial companies enhance quality and productivity.

Advanced Model 3250 Single-Sample Osmometer Specifications*

Sample volume	200 to 250 µL
Test time	Low range: 2 minutes (approximate) High range: 3 minutes (approximate)
Sample capacity	Single sample
Units	mOsm/kg H_2O
Resolution	1 mOsm/kg H_2O
Range	Low range: 0 to 2000 mOsm/kg H_2O High range: 1400 to 4000 mOsm/kg H_2O
Linearity	Less than ±0.5% from a straight line over calibrated range
Repeatability	Std. deviation ≤2 mOsm/kg H_2O between 0 and 400 mOsm/kg H_2O; Std. deviation ≤0.5% of value between 400 and 4000 mOsm/kg H_2O
Drift	Less than 1 mOsm/kg H_2O per month
Temperature effects[1]	Less than 1 mOsm/kg H_2O per 5°C (9°F) ambient temperature change
Communications	Onboard printer, DTE RS-232 serial port, and optional bar code scanner
Supported languages	English, French, German, Spanish, Italian, Portuguese, Swedish, Danish, Turkish, Czech, Slovak
Storage temperature	-40°C to +45°C (-40°F to +113°F)
Electrical voltage	100 to 240 V AC (50/60 Hz)
Power consumption	95 W
Dimensions	16" H x 13" W x 18" D (40.6 cm x 33.0 cm x 45.7 cm)
Net weight	23.0 lb (10.4 kg)
Shipping weight	34.0 lb (15.4 kg)
Warranty	One-year limited warranty on workmanship and all parts except glass, plastic, and parts warranted by their makers

[1] **Operating Conditions** — Temperature 18°C to 35°C (64°F to 95°F); 5% to 80% relative humidity (noncondensing)

* Specifications subject to change

CE IVD

The management system governing the manufacturing of this product is ISO 9001 and ISO 13485 registered.

Advanced Model 3250 Single-Sample Osmometer Parts and Supplies

Part #	Description
	Osmometer Calibration Standards and Reference Solutions
3LA011	100 mOsm Calibration Standard, 10x5 mL
3LA051	500 mOsm Calibration Standard, 10x5 mL
3LA091	900 mOsm Calibration Standard, 10x5 mL
3LA151	1500 mOsm Calibration Standard, 10x5 mL
3LA201	2000 mOsm Calibration Standard, 10x5 mL
3LA301	3000 mOsm Calibration Standard, 10x5 mL
3LA028	Osmolality Linearity Set, 100-2000 mOsm/kg, 5x2x5 mL
3LA029	Clinitrol 290 Reference Solution, 10x5 mL
	Osmometer Control Solutions
3MA028	Protinol 3-Level Osmometer Control, 3x3x3 mL
3LA085	Renol 2-Level Osmometer Control, 2x4x3 mL
	Osmometer Supplies and Accessories
3LA825	Sample Tube, Plastic, Box 500
3LA824	Sample Tube, Glass, 12/pkg
3DA811	Heat Transfer Fluid, 1x150 mL
3D2340	Air Filters, Disposable, 6/pkg
330016	Bar Code Scanner
FLA835	Thermal Printer Paper, 5 rolls
3LA846	30 Sample Tube Rack
3255	User's Guide
3255SM	Service Manual



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

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ADVANCED INSTRUMENTS

Two Technology Way / 781-320-9000
Norwood, Massachusetts 02062, USA
800-225-4034 Fax: 781-320-8181
www.aicompanies.com
info@aicompanies.com

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