

YASN LIMITED

We always focus on Osmometers.

YASN
Lab Technologies

Micro-Volume Freezing Point Osmometer



YASN LAB TECHNOLOGIES

The only thing we are focusing is osmometer

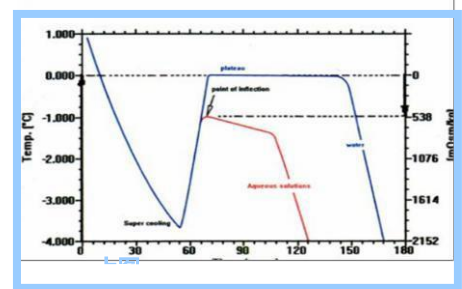
Micro-Volume Freezing Point Osmometer

Model: Osmo210 (For Pharmaceutical customers)

MEASURING PRINCIPLE

Osmometers are instruments for determination of osmotic concentration of aqueous solutions. A small amount of aqueous solution (30µl~50µl) is used to measure the freezing point. Based on this value the instrument calculates the osmotic concentration (=osmotic pressure) and displays it.

The freezing point of aqueous solutions is measured. The depression of freezing point compared to pure water is direct related to the osmotic concentration. Pure water freezes at 0°C, an aqueous solution with an osmolality of 1 osmol/kg water at -1.858°C. 1 Mol of a substance dissolved in 1 kg of water gives a solution with an osmotic concentration of 1 osmol/kg water only if it is an ideal solution and if the substance does not dissociate.



DESCRIPTION

Osmo210 is the 3rd generation osmometer made by YASN Limited. It is an automatic freezing point osmometer with sample volume of 30~50ul and specially designed for biotech industry with very powerful 21 CFR Part 11 related features incl. multi-level pass word protected user accounts, time stamped audit trail with ability of linking sample ID and user ID to test results for improved traceability.

Other useful features include touch screen user interface, automatic measuring head operation, 32G mass memory for long term data storage and user defined calibration points.

All above useful features make Osmo210 an ideal osmometer for biotech industry.



FEATURES & FUNCTIONS

FREEZING POINT DEPRESSION TECHNOLOGY

Osmo210 determines the osmolality of solutions using freezing point depression technology, which is the industry preferred method for determining sample concentration because it accounts for all solutes in solution.

SOLID STATE COOLING TECHNOLOGY

Osmo210 cools samples by Peltier elements. No cooling liquid, no maintenance.

21 CFR PART 11 RELATED FEATURES

Multi-level user accounts could be created without an external PC. The number of accounts is unlimited. All user accounts are password protected with the ability to link sample ID and user ID to test results for improved traceability.

TOUCH SCREEN USER INTERFACE

Osmo210 is easy-to-use with an intuitive, color-coded menu-driven operating system.

STURDY AND DURABLE STAINLESS-STEEL THERMISTOR

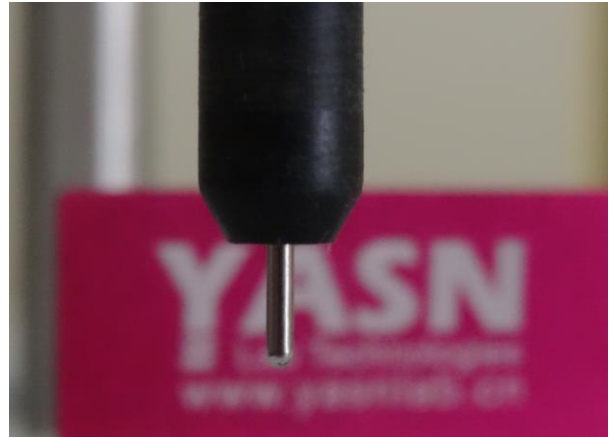
It ensures high measurement precision, and is more durable than glass thermistors. The stainless steel thermistor is easy to be cleaned by any non-woven tissue to eliminate sample carryover.

IR SENSOR AT SAMPLE POSITION

IR sensor could protect the thermistor from going down in case of missing sample tube. This function could avoid the damage of expensive thermistor.

USER-DEFINED CALIBRATION POINTS

Variable calibration point fully meets the requirements of Chinese Pharmacopoeia. Default calibration point of 50 and 850 mOsm are also available at user's option.



USER-DEFINED SUPERCOOL POINT

User can adjust supercool point to measure samples with lower freezing point.

STABLE CALIBRATIONS

The unit has been calibrated in factory and ready to use. Occasional checks show that the calibration is very stable.

COOLING ADAPTATION

Osmo 210 is equipped with a variable speed fan to remove heat when the osmometer is working in higher ambient temperature.

READY TO CONNECT WITH PC, BARCODE READER AND EXTERNAL PRINTER

Osmo210 is equipped Mini USB, RS 232 port, which can easily output, download and view log of all users including the calibration data, test results, working status, error message and events.

ON-BOARD STATISTICAL ANALYSIS

Osmo210 calculates the repeatability, standard deviation and mean value instantly. The date, time and language are adjustable through built-in menu.

32G MASS MEMORY

For long term data storage purpose.

TECHNICAL PARAMETERS

Sample Volume	25-50 μ L
Test Time:	90 Sec
Sample Capacity:	Single
Unit:	mOsm/kg H ₂ O
Resolution:	1 mOsm/kg H ₂ O
Measure Range:	0 - 3000 mOsm/kg H ₂ O
Repeatability:	RSD 1
Accuracy:	$\leq \pm 3$ mOsmol/kg,[0-400 mOsmol/kg] $\leq \pm 1.0\%$, [400-1500 mOsmol/kg] $\leq \pm 1.5\%$, [1500-3000 mOsmol/kg]
Communication:	RS-232 and USB
Language:	English

Working Conditions

Temperature:	+5 ~ +36
Humidity:	5- 80% Relative humidity (no condense)
Power:	115V/230V/180V, 50/60 Hz

Transportation:

Dimension:	30x30x28 cm
Net Weight:	13 kg
Shipping Weight:	15 kg

Warranty

12 months after delivery.
Consumables are not covered by warranty.

Standard Configuration:

1) Osmo210 Micro-Volume Osmometer	1 set
2) Calibration solution 50mosm, 10 ea. x 2 ml	1 pack
3) Calibration solution 850mosm, 10 ea. x 2 ml	1 pack
4) Calibration Solution 2000mosm, 10 ea. x 2 ml	1 pack
5) Calibration Solution 3000mosm, 10 ea. x 2 ml	1 pack
6) Reference Solution 290mosm, 10 ea. x 2 ml	1 pack
7) Disposable plastic sample tubes, 200 pcs.	1 pack
8) User Manual	1 ea.
9) Power line	1 ea.

YASN IS THE OSMOMETER COMPANY

YASN was established in 2000 as a manufacturer's representative firm and has grown into a full manufacturing and R&D facility. The main products for YASN are different kinds of osmometers.

YASN, is the only company focusing on providing different kinds of osmometers to local customers. YASN osmometers are used extensively by the customers of universities, scientific research institutes, pharmaceutical and biotechnological, food & beverages industry.

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