

YASN LIMITED

We always focus on Osmometers.



Micro-Volume Freezing Point Osmometer



YASN LAB TECHNOLOGIES

The only thing we are focusing is osmometer

Micro-Volume Freezing Point Osmometer

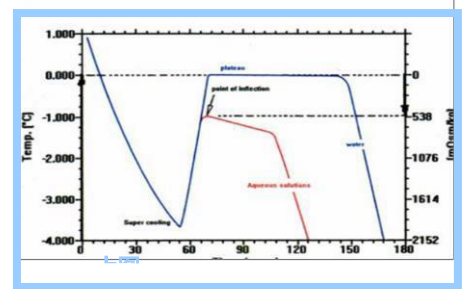
Model: Osmo 310 (For Scientific Research customers)

MEASURING PRINCIPLE

Osmometers are instruments for determination of osmotic concentration of aqueous solutions. A small amount of aqueous solution (30 μ l~50 μ l) 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 directly 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

Osmo 310 is the 3rd generation osmometer made by YASN Limited. It is an automatic freezing point osmometer with sample volume of 30~50 μ l and specially designed for scientific research customers.

Useful features include touch screen user interface, automatic measuring head operation, 32G mass memory make Osmo310 well accepted by customers of universities and scientific research institutes.



FEATURES & FUNCTIONS

FREEZING POINT DEPRESSION TECHNOLOGY

Osmo310 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

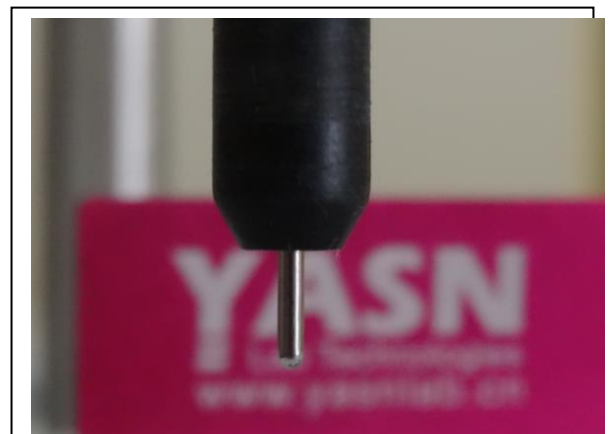
Osmo310 cools samples by Peltier elements. No cooling liquid, no maintenance.

TOUCH SCREEN USER INTERFACE

Osmo310 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

Osmo310 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

Osmo310 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.

32G MASS MEMORY

For long term data storage purpose.

TECHNICAL PARAMETERS

Basic Performance

Sample Volume:	30-50 μ L
Test Time:	about 90 Sec.
Sample Capacity:	Single sample
Unit :	mOsm/kg H ₂ O
Resolution:	1 mOsm/kg H ₂ O
Measuring Range:	0 - 3000 mOsm/kg H ₂ O
Repeatability:	0 - 400 mOsm/kg H ₂ O: \pm 2 400-3000 mOsm/kg H ₂ O: \pm 0.5% (1 S.D.)
Linearity:	<1%
Communication:	Serial RS-232 and USB
Language:	English

Working Conditions

Temp. Range:	+5 ~ +38 $^{\circ}$ C
Environment Humidity:	5- 80% RH (no condense)
Storage Temperature :	-40 to + 45 deg Celsius
Power Requirements:	115V/230V/180V, 50/60 Hz

Shipping Information

Dimension:	45x45x35 cm
Net Weight:	5.5 kg
Shipping Weight:	10.5 kg

Warranty

12 months after delivery.

Consumables are not covered by warranty.

Standard Configuration

1)	Osmo310 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.

YASN UK

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