

Automatic Osmotic Pressure Analyzer

OSMO STATION

OM-6060



Precise measurement of Osmotic Pressure (<1% CV) in less than 3 minutes

Noise-free, proven freezing-point depression method using ultra supercooling

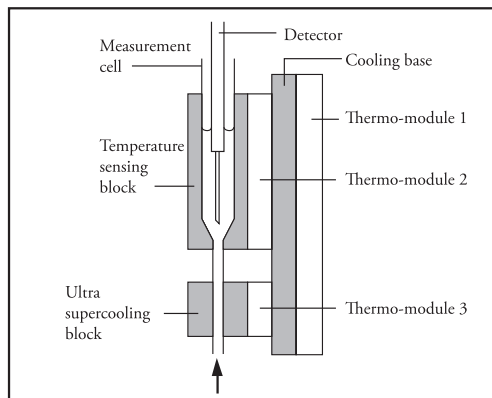
Satisfies every need from clinical to R&D

Automatic Osmotic Pressure Analyzer

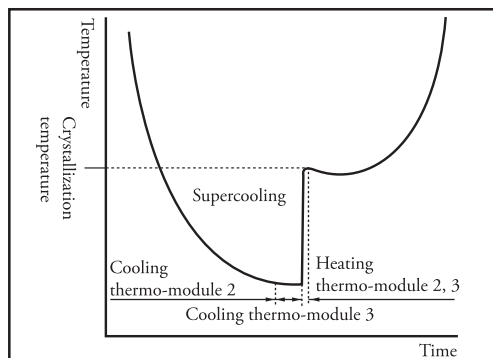
OSMO STATION

OM-6060

**A popular automatic osmometer
that satisfies all your clinical and
R&D/QA needs**



Measurement cell



Sample temperature during measurement

Ultra supercooling measurement method

ARKRAY'S unique ultra supercooling method enables noise-free, accurate measurement.

< Freezing point depression principle >

1. A sample is drawn into the measurement cell.
2. Cooling the temperature sensing block keeps the sample in a liquid state even if the temperature falls to its freezing point (supercooling state).
3. Cooling the ultra supercooling block to below its freezing point allows the sample to freeze into cryohydrate.
4. The sample's cryohydrate formation temperature is measured and the osmotic pressure is calculated based on the calibration curve obtained via calibration.
5. By heating the temperature sensing block and ultra supercooling block, the sample dissolves.
6. The measurement result is printed and the sample is discharged into the drain bottle.

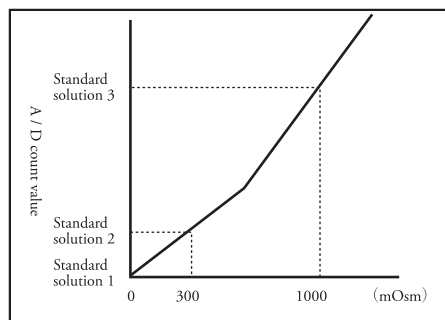
Calibration

There are 2 possible calibration methods.

3-point calibration

Purified water (0 mOsm) and 2 types of standard solutions (300 mOsm/1000 mOsm) are used.

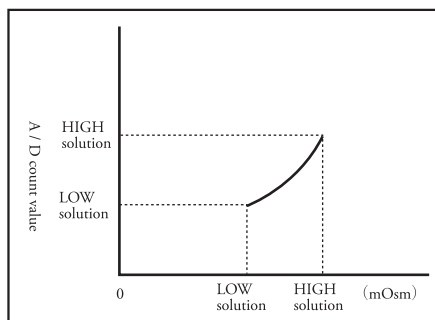
*Recommended when the osmotic pressure of a sample cannot be predicted.



3-point calibration curve

2-point calibration

Two types of solutions (LOW/HIGH) with a known osmotic pressure are used. *Recommended when the osmotic pressure of a sample is roughly known. The smaller the concentration range between LOW and HIGH, the more accurate the data will be.



2-point calibration curve

Measurement method

Turntable specifications

Up to 24 samples can be measured sequentially using the turntable.

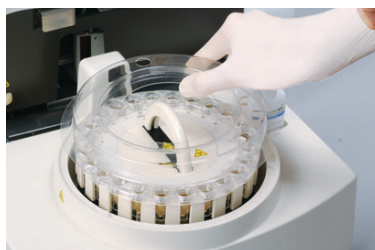
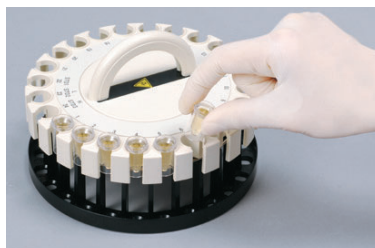
- (1) Prepare sample tubes or sample cups that contain samples.



- (2) Set the sample tubes or sample cups onto the turntable.



- (3) Set the turntable onto the instrument.
When using sample cups, set the anti-evaporation cover A and B.



Press the No. key to enter the sample number.



Press the start key to start measurement.

Specifications	
Measurement item	Osmotic pressure of body fluid (Ratio of osmotic pressure)
Measurement objects	Blood serum, plasma, and urine*1
Measurement principle	Freezing-point depression using ultra supercooling
Measurement range	0 - 2000 mOsm (Switchable to "0 - 2500 mOsm"*2)
Measurement precision	CV 1% or less (200 - 300 mOsm)
Measurement accuracy	±3 mOsm/kg (0 - 300 mOsm)
Required sample volume	Minimum 200 µL (500 µL sample cup), Minimum 2 mL (o.d. 12.3 x height 100 mm sample collection tube)
Processing speed	2 - 3 minutes/sample
Number of measurement samples	Maximum 24 samples
Calibration	3-point calibration (0, 300, 1000 mOsm: polygonal line approximation), 2-point calibration (any 2 points: logarithmic curve approximation)
Memory capacity	500 measurement results
Display	24-digit x 2-line LCD with a backlight
Built-in printer	58-mm width thermal printer paper (24 digits)
External output	Compliant with RS-232C standard, two-way communication function (compatible with OM-6050, OM-6040, OM-6030, and OM-6020), Ethernet (option)
Operating environment	Temperature: 10 - 30°C Humidity: 20 - 80% RH (no condensation)
Power input	Maximum 160 VA
Power requirements	100 - 240 V AC (Max. power line fluctuation of ±10%), 50/60 Hz
Dimensions	320 (W) x 460 (D) x 447 (H) mm
Weight	Main body: 18 kg , Turntable unit: 3 kg

This instrument is EMC specification JIS CI806-1:2001 compliant.

*1: We cannot guarantee a margin of error for measurement with samples other than serum, plasma and urine.

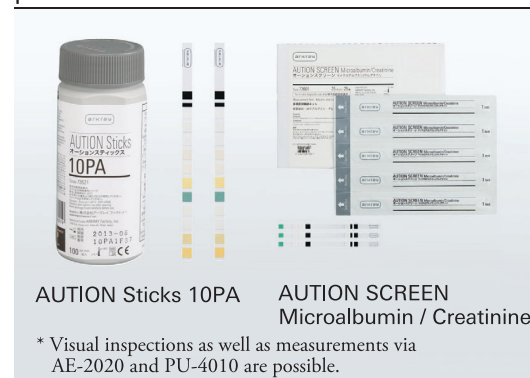
We adopted the freezing point depression method as the measurement principle.

For this reason, we use sodium chloride solution as a reference solution for calibration.

Please note that it is possible that some discrepancies in measurement values could arise when using samples that differ from sodium chloride solution in properties such as viscosity.

*2: Please contact us in regard to changes in the measurement range.

Urine test strips
Urine protein or microalbumin correction is possible with creatinine.



Compact urine analyzer
Automatic calculation of P/C ratio and A/C ratio



*Designs and specifications may be changed without prior notice

arkray global business, inc.

Yousuien-nai, 59 Gansuin-cho,
Kamigyo-ku, Kyoto 602-0008, JAPAN

TEL 81-75-662-8979 FAX +81-75-431-1202