Automatic Osmometer

OSMO STATION™

OM-6060

Added user-friendliness with
established reliability and functionality.
Statisfies every need from
clinical to R&D.

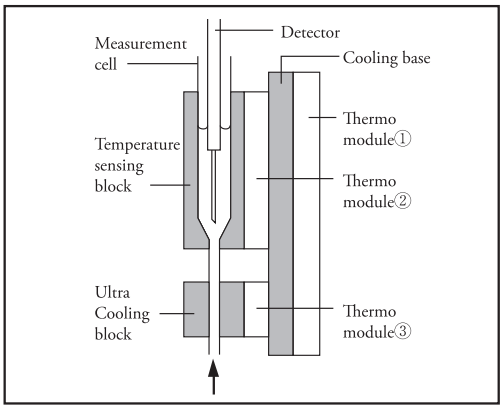
arkray,inc.

Automatic Osmometer

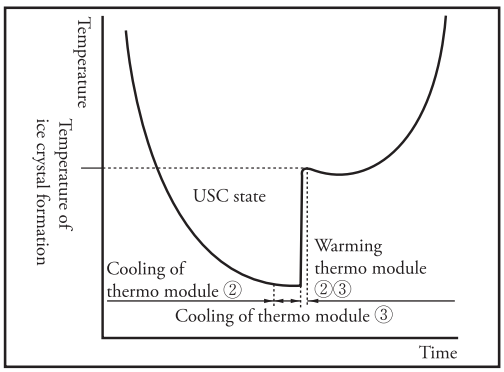
OSMO STATION™

OM-6060

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



Concept diagram



Temperature of sample during measurement

Ultra cooling measurement method

ARKRAY'S unique Ultra Cooling method enables noise-free and accurate measurement.

< Freezing point depression principle >

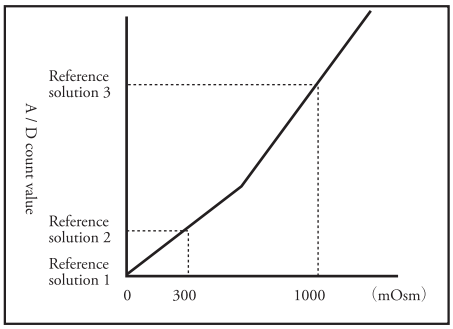
1. Sample drawn into measurement cell.
2. Cooling temperature detection block keeps sample in a liquid state even if temperature falls to freezing point (Ultra Cooling state).
3. Cooling USC block to below freezing point allows sample to freeze into ice crystals.
4. Measurement of ice crystal formation temperature in sample and calculation of osmotic pressure based on calibration-based analytical curve.
5. Heating of temperature sensing block and USC block to melt the sample.
6. Sample emptied into waste bottle.

Free calibration

Two-way calibration possible.

3 point calibration

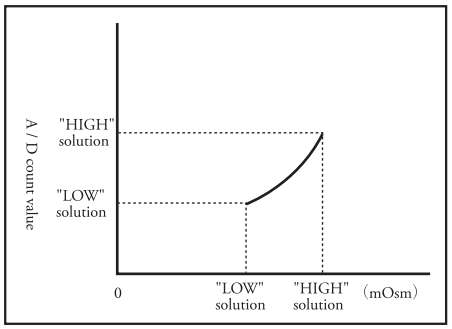
Use purified water (0mOsm) and 2 reference solutions (300 mOsm / 1000mOsm) (for when the osmotic pressure of the sample cannot be predicted.)



Analytical curve graph using 3 point calibration method

2 point calibration

Use two kinds of solution (LOW/HIGH) with a known osmotic pressure. (Calibration method for when the osmotic pressure of the sample is roughly known.) The smaller the concentration region between "LOW" and "HIGH", the more accurate the data will be.



Analytical curve graph with 2 point calibration method

Data

Within-run reproducibility

	Standard Solution		Serum	Control serum		Urine
	300mOsm	1000mOsm		A	B	
Mean (mOsm)	300.1	1000.5	303.2	296.9	361.9	753.8
SD	0.3	1.3	0.7	0.5	0.5	0.7
CV (%)	0.1	0.1	0.2	0.2	0.1	0.1

Between-run reproducibility

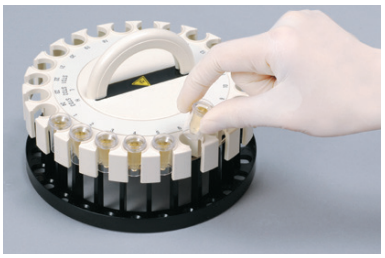
	Standard Solution		Control serum	Urine
	300mOsm	1000mOsm		
Mean (mOsm)	300.1	1001.2	297.1	753.5
SD	0.3	0.5	0.2	0.9
CV (%)	0.1	0.1	0.1	0.1

Measurement method

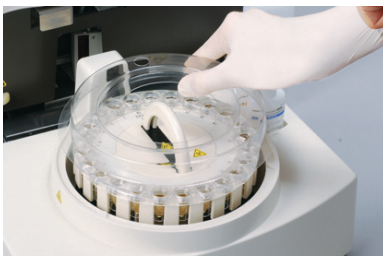
Turntable Type

Up to 24 samples' can be measured sequentially by the turntable. Turntable is compatible with OM-6060.

①Prepare blood collection tube or sample cup with sample.



②Set the blood collection tube or sample cup in the turntable.



③Set the turntable on the equipment. When using sample cup, set Evaporation prevent cover A and B.

Press No. key to enter sample number

Press start key to start measurement

Handling of emergency measurements

Press STAT key and set sample cup in STAT port to interrupt regular measurement.

Specification	Turntable Type
Measurement item	Osmotic pressure of body fluid (Ratio of osmotic pressure)
Sample types	Serum, plasma, urine※1
Measurement principle	Freezing point depression method using USC system
Measurement range	0-2000mOsm (Measurement range can be changed to 0-2500mOsm through use of a switch※2)
Measurement accuracy	Less than 1% C.V. (200～300 mOsm)
Minimum sample volume	Sample cup: 200μL and more Blood collection tube: 2mL and more (When urine spitz turntable※3 is used. Urine Spitz: 2mL and more)
Measurement time	2-3 mins / sample
Number of sample set	Up to 24 samples (When urine spitz turntable※3 is used.Up to 10 samples)
Calibration method	3 point calibration (0, 300, 1000mOsm: Piecewise linear approximation), 2 point calibration
Data storage capacity	500 measurement results
Display	24-digit, 2-line, Backlight LCD
Built-in printer	24 space thermal paper
External output	Compliant with RS-232C, two-way communication function (compatibility mode with OM-6050,OM-6040,OM-6030, OM-6020),Ethernet (Option)
Measurement condition	Temperature: 10-30℃ Humidity: 20-80% (with no condensation)
Power input	Up to 160 VA
Power supply voltage	AC 100 V, 50 / 60 Hz
Dimension	320 (W)×460 (D)×447 (H) mm
Weight	Main body: 18kg Turntable unit: 3kg

This equipment is EMC specification JIS C1806-1:2001 compliant.

※1：We cannot guarantee 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 value 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 measurement range.

※3：Urine spitz turntable is a optional product.

Urine Test Strips
Able to compensate the urine protein or microalbumin by creatinine.

AUTION Sticks 10PA

AUTION SCREEN
Microalbumin / Creatinine

※Able to measure by visual inspection and equipment measurement by AE-4020 and PU-4010.

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

AUTION ELEVEN™
AE-4020

PocketChem™ UA
PU-4010

Turntable Type

※Design and specifications may be changed without prior notice

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