



Specification	Rack specification
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: 200 $\mu$ L and more
Measurement time	2-3 mins / sample
Number of sample set	Up to 5 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 °C Humidity: 20-80% (with no condensation)
Power input	Up to 160 VA
Power supply voltage	AC 100 V, 50 / 60 Hz
Dimension	320(W) × 355(D) × 340(H) mm
Weight	Main body: 17kg, Sampler unit: 2kg

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.

※Please note that external appearance and specification may change for improvement without prior notice.

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Automatic Osmometer

# OSMO STATION™

OSMO STATION™ OM-6060

Osmotic pressure

# OSMO STATION™

OSMO STATION™ OM-6060

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Osmotic pressure measurement system

The flexibility to meet various inspection/R&D needs.  
The leading osmotic pressure measurement technology.

Added user-friendliness with established reliability and functionality.

Satisfies every need from clinical to R&D.



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# OSMO STATION™

OSMO STATION™ OM-6060

Osmotic pressure

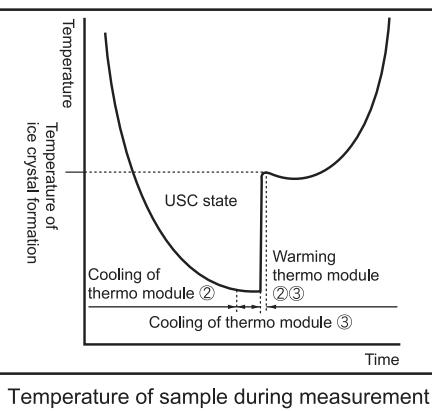
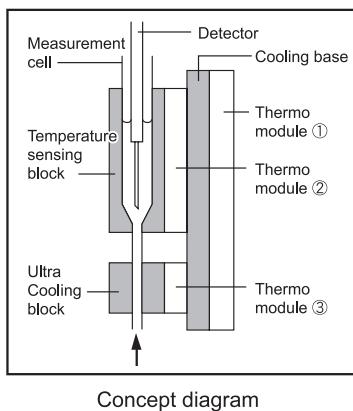
A popular automatic osmometer  
that satisfies all your clinical and R&D/ QA needs

## 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.

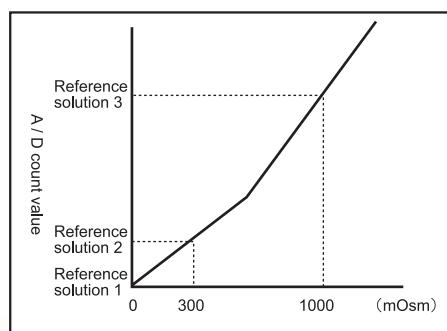


## Free calibration

**Two-way calibration possible.**

### 3 point calibration

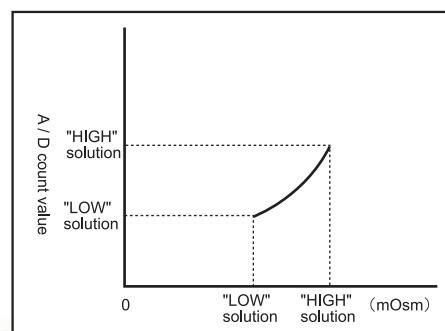
Use purified water(0mOsm) and 2 reference solutions(300 mOsm / 1000mOsm)  
(for when the osmotic pressure of the sample cannot be predicted.)



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

	Serum		Control serum		Urine	
	Low	High	Normal	Abnormal	Low	High
Mean(mOsm/kg)	287.6	313.4	304.2	371.9	286.3	1093.3
SD(mOsm/kg)	0.5	0.8	0.6	0.7	0.5	2.8
CV(%)	0.2	0.3	0.2	0.2	0.2	0.3
(n=10)						

### Between-run reproducibility

	Serum		Control serum		Urine	
	Low	High	Normal	Abnormal	Low	High
Mean(mOsm/kg)	287.2	313.0	310.1	382.0	286.2	1092.7
SD(mOsm/kg)	0.9	0.5	0.6	1.1	0.6	4.6
CV(%)	0.3	0.2	0.2	0.3	0.2	0.4
(n=10)						

## Measurement method

### Rack specification

Up to 5 samples' can be measured sequentially.  
Smaller footprint for space-saving osmotic pressure measurement.

### 1 Prepare sample

- ① Prepare a sample cup with sample.



- ② Set the sample cup in the sample rack.



- ③ Set Evaporation control cover B on sample rack.



- ④ Set the sample rack on the equipment and set Evaporation control cover A.

### Handling of emergency measurements

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



### 2 Press No. key to enter sample number



### 3 Press start key to start measurement

