

Automatic Osmometer

# OSMO STATION™

OM-6060



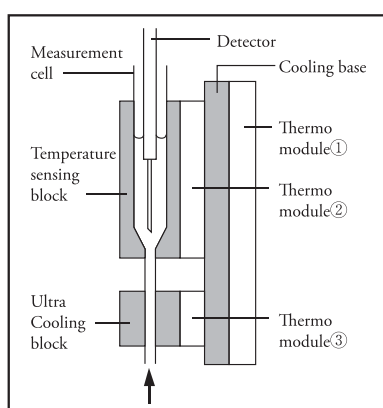
Added user-friendliness with  
established reliability and functionality.  
Satisfies every need from  
clinical to R&D.

Automatic Osmometer

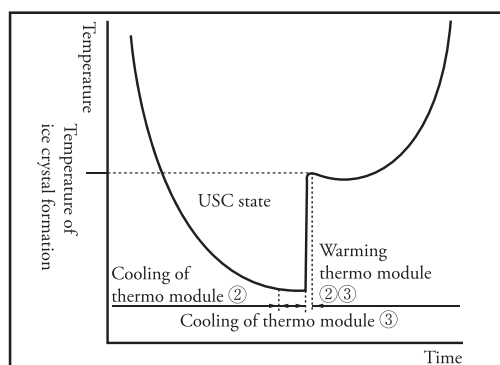
# OSMO STATION™

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 >

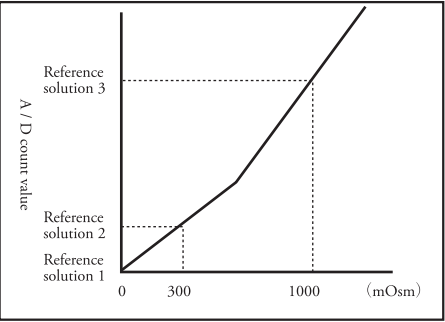
1. Sample drawn into measurement cell.
2. Cooling temperature detection block keeps sample in a liquid state even if temperature falls to freezing point (Ultra Cooling state).
3. Cooling USC block to below freezing point allows sample to freeze into ice crystals.
4. Measurement of ice crystal formation 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

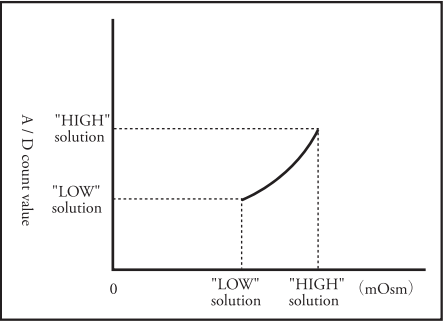
Use purified water (0mOsm) and 2 reference solutions (300 mOsm / 1000mOsm) (for when the osmotic pressure of the sample cannot be predicted.)



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

Rack Type

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



- ①Prepare a sample cup with sample.
- ②Set the sample cup in the sample rack.
- ③Set Evaporation control cover B on sample rack.
- ④Set the sample rack on the equipment and set Evaporation control cover A.

Turntable Type

Up to 24 samples' can be measured sequentially by the turntable. Turntable is compatible with OM-6050.

- 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	Rack Type		Turntable Type
Measurement item	Osmotic pressure of body fluid (Ratio of osmotic pressure)		
Sample types	Serum, plasma, urine <sup>※1</sup>		
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 <sup>※2</sup> )		
Measurement accuracy	Less than 1% C.V. (200～300 mOsm)		
Minimum sample volume	Sample cup: 200 μL and more	Sample cup: 200μL and more Blood collection tube: 2mL and more (When urine spitzz turntable <sup>※3</sup> is used. Urine Spitz: 2mL and more)	
Measurement time	2-3 mins / sample		
Number of sample set	Up to 5 samples	Up to 24 samples (When urine spitzz turntable <sup>※3</sup> 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) ×355 (D) ×340 (H) mm	320 (W) ×460 (D) ×447 (H) mm	
Weight	Main body: 17kg Sampler unit: 2kg	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.

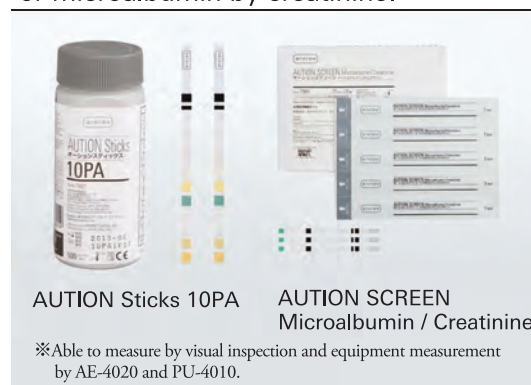
Please note that it is possible that some discrepancies in measurement value could arise when using samples that differ from sodium chloride solution in properties such as viscosity.

※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.

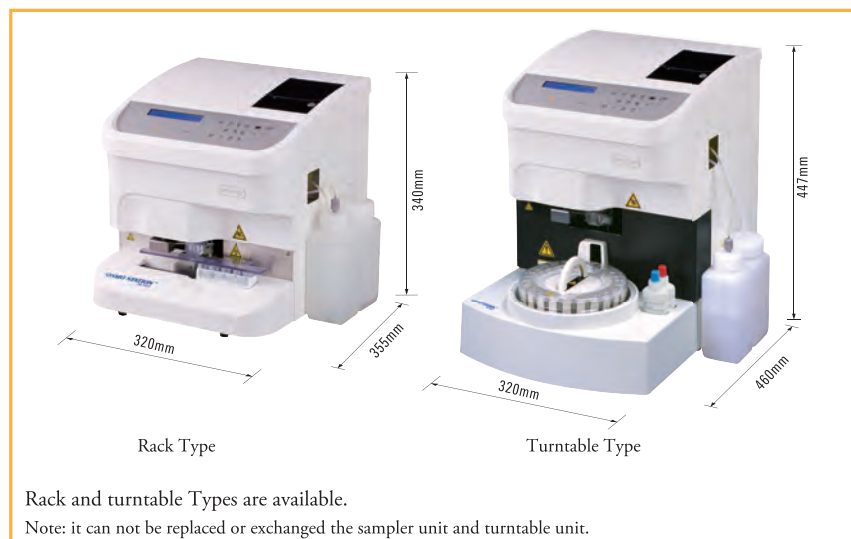
## Compact urine analyzer

Automatic calculation of P/C ratio and A/C ratio



AUTION ELEVEN™  
AE-4020

PocketChem™ UA  
PU-4010



Rack Type

Turntable Type

Rack and turntable Types are available.

Note: it can not be replaced or exchanged the sampler unit and turntable unit.

※Design and specifications may be changed without prior notice

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