

Fully Automated Integrated Urine Analyzer

AUTION HYBRID™

AU-4050



The world's first "all-in-one solution"

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Urine chemistry

Reduced false positives and false negatives

The AU-4050 provides the user with high precision data, reducing the incidence of both false positives and false negatives through the use of abnormal color detection, creatinine correction for urine protein and other functions.

► Abnormal color detection

Auto-detection function for abnormal coloration of test strips caused by medication etc.

► Blank Pad

A test strip has a blank pads for correction of influence from urine pigmentation.

► Creatinine correction for urine protein with Uriflet S 10HB

As protein/creatinine ratio can be calculated by creatinine measurement, even urine collected on the spot can be used for high-accuracy protein measurement, thus negating the effect from increased/ decreased urine concentration.

► Temperature correction

Temperature correction is automatically performed to correct for error caused by changes in the ambient temperature within the range 15-30°C .

► S.G. calibration

S.G. calibration is corrected using test results of urine sugar or urine protein.

Two types of test strips can be loaded

Two test strips types can be loaded into a single instrument and a specific test strip type can be selected for each sample and/or rack. When the two feeder units are filled with a single strip type, continuous measurement of up to 400 tests can be performed.



*Two strip feeders
(200 strips x 2 feeder units)

Urine chemistry

Urine sediment

Data analysis

All-in-one solution

The AU-4050 is a fully automated integrated urine analyzer, which not only provides data from urine chemistry and analysis of urine sediment but also analyzes the data. It has a reduced footprint size with dimensions of 800(W)×720(D)×720(H)mm.

First report: 2 min 15 seconds at the fastest

First report takes just 2 minutes 15 seconds. The processing speed is 100-200 samples per hour. Note: Processing speed will vary depending on instrument settings or the proportion of urine chemistry testing to urine sediment analysis.

Urine sediment

High precision flow cytometry analysis

Flow cytometry with the AU-4050, is performed using a semiconductor laser for high precision differentiation of urine sediment using three parameters (forward-scattered light, lateral-scattered light, and lateral fluorescence.)

► High sensitivity detection of bacteria

Specified nucleic acid staining reagent provides high precision detection of bacteria.

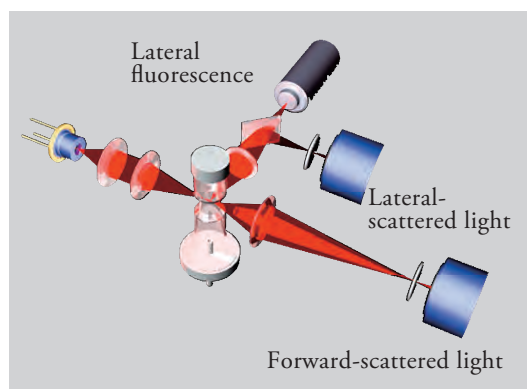
► RBC-info *

The analyzer judges what is presumed to be dysmorphic RBC from the particle size distribution of the flow cytometry.

► UTI-info *

The analyzer judges what is presumed to be urinary tract infection from the counts of WBC and bacteria.

* This is research information and cannot be used for diagnosis.



Manual analysis

With approximately 1.2mL of sample, you can run manual analysis of urine sediment. In addition, sampling cups can be used for manual analysis so no need to transfer urine to sample tubes.

Urine chemistry / Urine sediment

Measurement items can be specified for each rack.

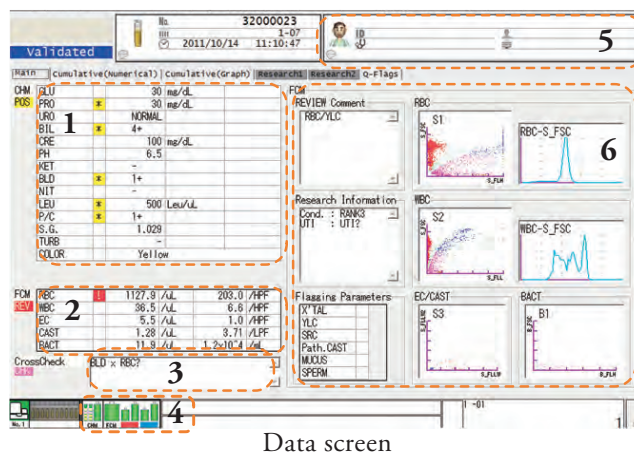
Measurement orders can be made using patient IDs read with barcodes. Measurement items can be specified for each rack by using item racks (No.1-10).

Example

No.1	Conduct only urine chemistry
No.2	Conduct only urine sediment analysis
No.3	Use test strips of feeder 1
No.4	Use test strips of feeder 2

Easy-to-use

Measurement with the IPU (Information Processing Unit) is as easy as using a personal computer. Tables and graphs are used to display test results.



Data screen

- 1 Urine chemistry measurement results are displayed here.
- 2 Urine sediment analysis measurement results are displayed here.
- 3 Cross check results are displayed here.
- 4 Reagent monitor are displayed here.
- 5 Patient demographics are displayed here.
- 6 Urine sediment analysis measurement results are displayed here.

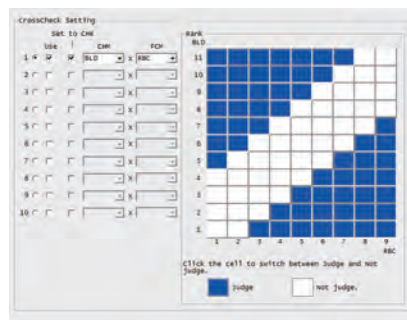
Analysis function

Cross check function

Cross-compares data related to the test results from urine chemistry testing and urine sediment analysis.

Reflex test function

Automatically issues a command to analyze urine sediment based on the urine chemistry test result.



Cross check screen

Specification	
Sample types	Urine
Sample loading	Sampler mode : 60 samples/ 70 samples (loading/ unloading) Manual mode (For urine sediment analysis only): 1 sample measurement by manual operation
Processing speed	100-200 samples per hour *Varies depending on the proportion of urine chemistry testing to urine sediment analysis
Required sample volume	5mL (Manual measurement: 1.2mL)
Sample consumption	2.2mL (0.95mL for urine chemistry testing only, 1.2mL for urine sediment analysis only)
Memory capacity	10,000 analyses (Urine chemistry testing, Urine sediment analysis, Quality control analysis, Check measurement)
External output	RS-232C, Ethernet
Communication method	Compatible with AX-4030, AX-4280, UF-1000i, UF-100
Laser class	Class I (IEC60825-1)
Operating conditions	Temperature : 10-40°C, Humidity : 20-80%RH (non-condensing)
Analysis environment	Temperature : 15-30°C, Humidity : 30-60%RH (non-condensing)
Temperature compensation function	Yes
Warm-up time	20 minutes
Dimensions	Analyzer : 800(W) × 720(D) × 720(H)mm
Weight	Approx.120kg (including the Sampler unit)
Power supply	AC100~240V, 50/60Hz
Power consumption	400VA

Performance (Urine chemistry)

Analysis parameters	GLU (glucose), PRO (protein), BIL (bilirubin), URO (urobilinogen), PH (pH), BLD (occult blood), KET (Ketone bodies), NIT (nitrite), LEU (leukocyte), CRE (creatinine), P/C (protein/creatinine ratio), S.G. (specific gravity), Turbidity, Color hue, ALB (m-albumin), A/C (m-albumin/creatinine ratio) (The analysis parameters vary depending on the specialized test strips used.)
Principles	Test strip : Dual-wavelength reflectance method (BLD : single-wavelength) Urine specific gravity : Reflection refractometry method Urine color hue : Transmission measurement method Urine turbidity : Light-scattering measurement method
Wavelength	5LED wavelengths (430, 500, 565, 635, 760nm)
Reagents	Uriflet S (9HA, 10HA, 10HB), Concentrated washing solution 3, AUTION CHECK I and II (control solution)
Test strip storage capacity	Maximum 400 strips (200strips × 2 feeder units)

Performance (Urine sediment analysis)

Analysis parameters	RBC (red blood cell), WBC (white blood cell), EC (epithelial cell), CAST (cast), BACT (bacteria)
Research parameters	X'TAL (crystal), YLC (yeast-like cell), SRC (small round cell), Path. CAST (pathological cast), MUCUS (mucus), SPERM (spermatozoa), Cond. (conductivity)
Flagging parameters	X'TAL, YLC, SRC, Path. CAST, MUCUS, SPERM
Research Information	RBC-Info. (RBC-information), Cond.-Info. (conductivity-information), UTI-Info. (urinary tract infection information)
Principle	Flow cytometry method using a 635nm red semiconductor laser
Reagents	AUTION Sheath Solution, AUTION Staining Solution (SED), AUTION Staining Solution (BAC), AUTION Diluent (SED), AUTION Diluent (BAC), AUTION Control Solution

*Design and specifications may be subject to change without notice.

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