FUS-100

Urine Sediment Analyzer

FUS-100 Specification and Technical Parameter

Item	RBC, WBC, WBCC, SQEP, NSE, HYAL, UNCC, BACT, SPRM, MUCS, CRYS, YST
Throughput	60 samples/h
Sample Volume	Minimum volume: 3mL non-centrifugeol urine (Integrated system minimum volume： 5mL non-centrifuged urine); aspiration volume: about 1mL
Test Principle	Flow cytometry; High-speed, High-depth of Field Imaging Technique
Formed Element Identification	Artificial intelligence identification technique
Workstation	Quad-core processor, Windows operating system, Bidirectional to LIS/HIS.
Data Storage	Storage capacity ⩾10,000
Connecting	Available for connecting with DIRUI H-800 Automatic Urine Analyzer. Combined result printing.
Printer	Hp laser printer

Equipment Parameter

Parameter	Technical requirement
Maximum Relative Deviation of the Result Accuracy	⩽±8.0%
Repeatability of the Test Items	CV⩽10%
Total Specificity (Automatic Identification)	＞80%
Total Specificity(Manual Verification)	⩾95%

Working Condition

Supply Voltage	AC100V～240V,50/60 Hz
Environmental Temperature	10℃～30℃
Relative Humidity	20%～80%
Atmospheric Pressure	860hPa～1060hPa

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· Specifications subject to change without notice.

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DIRUI

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Urine Sediment Analyzer

- Identify and classify by utilizing digital imaging technology, consistent with CLSI standards
- 810 frames of images for each sample
- Flow cytometry technology, without centrifugation and staining, contributes to cost-effective
- 12 categories of formed elements in urine can be identified accurately

Test Principle

✓ Flow cytometry

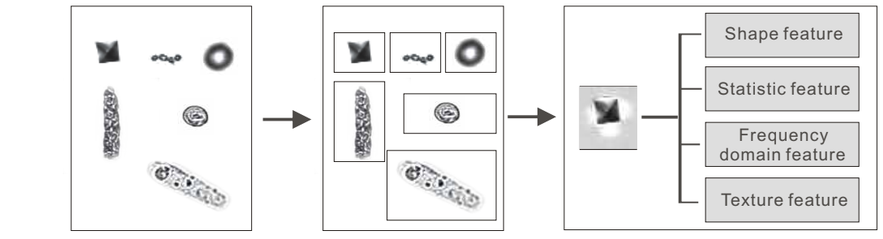
Utilizing flat flow cyometry, the sample passes through the system encapsulated within a layer sheath fluid. The sheath flow technique ensures: 1. The sample is located at the ideal focal range of the microscope lens. 2. The sample is maintained as a single cell layer during the imaging process, ensuring there is no loss of data or inaccurate results due to cell overlap. 3. The sheath flow allows for sediment diffusion, effectively preventing formed element aggregation and further improving the formed element identification process.

✓ High-speed, High-depth of Field Imaging Technique

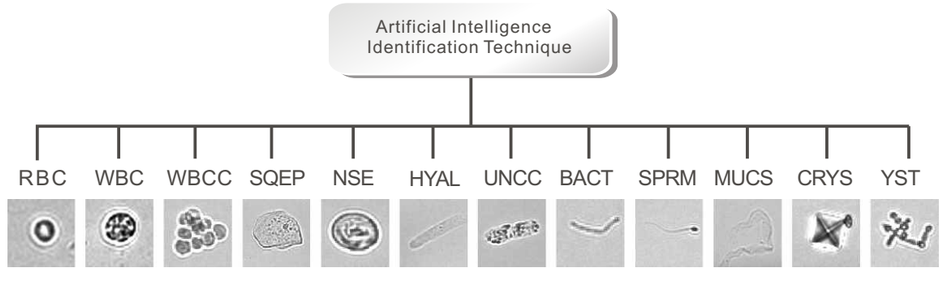
Microscope imaging is illuminated by a high-speed flashing bulb (40 flashes per second). Illuminated sample images are captured by a high-definition CCD camera.810 images of each sample are captured and analyzed by the sediment identification software.

✓ Artificial Intelligence Identification Technique

Images of formed elements are processed by Dirui's intelligent identification software. Once identified, element images are extracted and classified according to shape, texture, size, statistic, and frequency domain. Upon completion of identification the real images from the actual sample are provided to the user through an easy-to-use software interface. Real images for real results.



(1) Capture (2) Segment (3) Feature extraction



(4) Identification and Classification