



## US-1680

### AI-Libre Urinalysis Analyzer

World **First** AI-Libre Urinalysis Analyzer

- 300 T/H for chemistry analysis
- 120 T/H for sediment analysis
- 120 T/H for both chemistry and sediment analysis

Compact, all in one design

**AI** technology (CNN, deep learning)

Real strip image display

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# US-1680

## AI-Libre Urinalysis Analyzer

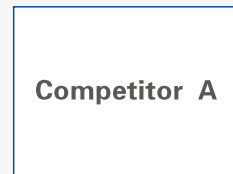


### Smallest All-in-one Urinalysis Analyzer

- 640mm by length only
- Save valuable laboratory space

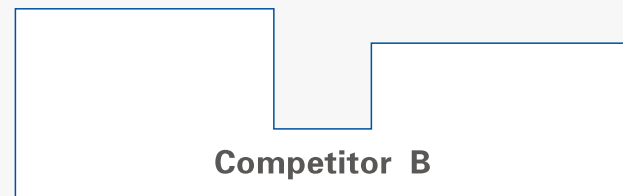


640mm



Competitor A

800mm



Competitor B

2200mm



### All in One

- Chemistry, sediment and physical analysis in one analyzer US-1680
- One aspiration, complete results
- Robust yet compact



### Good and Better

- Optional extension pre-storing and reclaiming tray to extend the sample capacity to 260
- Optional refractometer to provide more physical parameters (SG, Turbidity, Color)
- Optional ST module to utilize sample pretreatment for higher workload lab



### Less is More

- Routine consumption: sheath liquid and strip only
- Minimum sample volume 1.5~2.0mL
  - Chemistry analysis: 1.5mL
  - Sediment analysis: 2.0mL
  - Both analysis: 2.0mL



### Smart and Smarter

- DIY print template modification software integrated
- Intelligent abnormal sample flag
- Bi-directional LIS to follow LIS order to test chemistry, sediment or both flexibly
- Automatic QC function

<b>Throughput</b>	120~300 T/H <ul style="list-style-type: none"> <li>• 300 T/H for chemistry analysis</li> <li>• 120 T/H for sediment analysis</li> <li>• 120 T/H for both chemistry and sediment analysis</li> </ul>
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<b>Sample</b>	Nature urine
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<b>Minimum Sample Volume</b>	1.5mL for chemistry analysis; 2mL for sediment/ both chemistry and sediment analysis
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<b>Sample Position</b>	Stand-alone: 60; With expanding tray: 260; With ST module: 200
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<b>Display &amp; OS</b>	22-inch screen, Windows 10
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<b>Results Storage</b>	≥400,000
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<b>Communication</b>	LAN, USB, RS-232, PS/2, VGA
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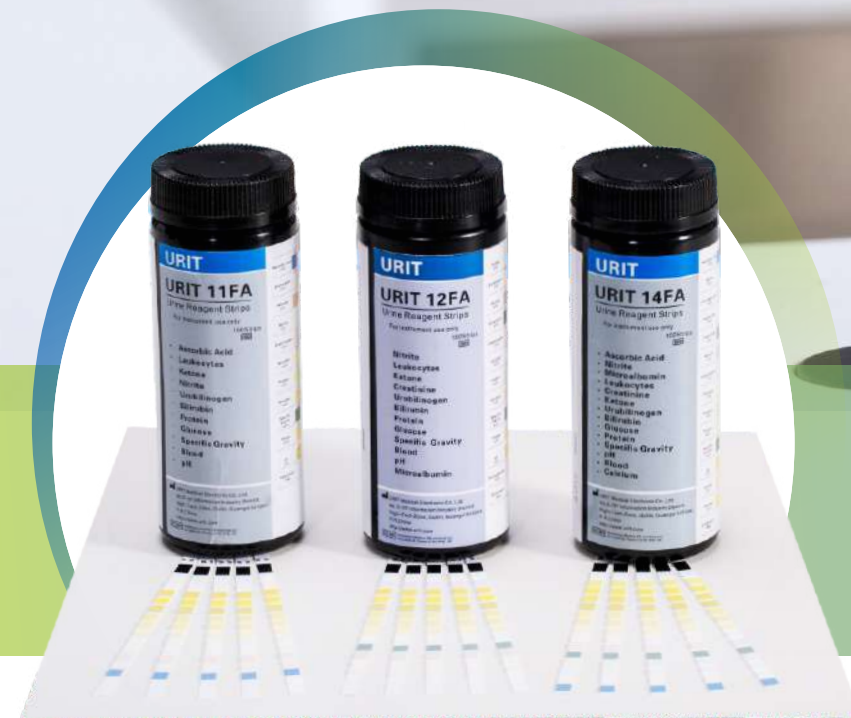
<b>Working Temperature</b>	5~40°C
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<b>Power Supply</b>	100V~240V~, 50/60Hz
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<b>Dimension</b>	640 mm(L)x705 mm(W)x618 mm(H)
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<b>Weight</b>	82.5 kg
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# US-1680 Chemistry analysis part



## Advanced CIS Imaging System

- High accuracy and high efficiency
- Real strip image display
- 5 wavelengths detection guarantees precise and confident results



## High Speed

- 300 T/H for chemistry analysis only
- 120 T/H for both chemistry and sediment analysis



## Physical Module

- Redesigned SG module to compensate temperature influence
- Improve test accuracy of urine specific gravity, turbidity and color



## Bar code Scanning Function

- High rate bar code scanning identification
- Shift test mode by scanning bar code through bi-directional LIS



## 14 Items Strips

- 14 test items including VitC, CR, MA and CA
- Albumin-to-Creatinine Ratio (ACR) helps to screen early kidney disease
- Compensation pad can eliminate urine color interference



## Liquid Level Sensing

- Liquid level sensing function to reduce the contact area between sample probe and urine
- Minimize the cross contamination interface

**Principle** CIS color detecting system, 5 wavelengths colorimetry method, refraction method

**Parameters** Strip parameters:  
 • 11FA: LEU, KET, NIT, URO, BIL, PRO, GLU, SG, BLD, pH, VitC  
 • 12FA: LEU, KET, NIT, URO, BIL, PRO, GLU, SG, BLD, pH, MA, CRE  
 • 14FA: LEU, KET, NIT, URO, BIL, PRO, GLU, SG, BLD, pH, VitC, MA, CRE, CA  
 System parameters: ACR(12FA, 14FA), COLOR, TURBIDITY

**Strips** 11FA, 12FA, 14FA

**Strip Cabin Capacity** 500







# US-1680

## Sediment analysis part



### Urine Sediment Analysis

- Flowcell digital imaging automatic identification
- High-definition video
- 800 frames image capture
- High speed data acquisition card



### AI Technology

- Deep learning system
- Multi-layer neural network (CNN), more intelligent
- Expanded learning and migration learning technology, more compatible

**Principle** AI recognition technology, flat sheath flow technology, digital imaging technology

**Parameters**

**Urine formed elements**  
RBC, WBC, WBCC, HYA, PAT, SQEP, NSE, CAO, URIC, UNCX, BACT, YST, MUCS, SPRM and etc.

**RBC phase detection**  
MCV, RDW, abnormal RBC ratio

**Integrate urine dry chemistry results**

**Camera resolution** 4 megapixels

**Pictures for each sample** 800

**Lens** 40X



### High Speed & Reliability

- 120 T/H constant speed for sediment analysis
- To be fast but never compromising on high resolution pictures and reliable results



### Consolidation of Urine Work Area

- New generation report interface
- Full report covers physical examination results, dry chemistry results, formed element results, RBC phase information and real strip image



### High Resolution Pictures

- 400 times magnified image
- 4 million pixels picture
- Guarantee the recognition accuracy rate

