



US-500

AI-Libre Urinalysis Analyzer

World **First** semi-automatic AI-Libre Urinalysis Analyzer

- 60 T/H for dry chemistry test
- 30 T/H for sediment analysis
- 25 T/H for both

Compact, two in one design

AI technology (CNN, deep learning)

Automation of microscope with raw big picture

Ideal choice for small and medium size laboratory



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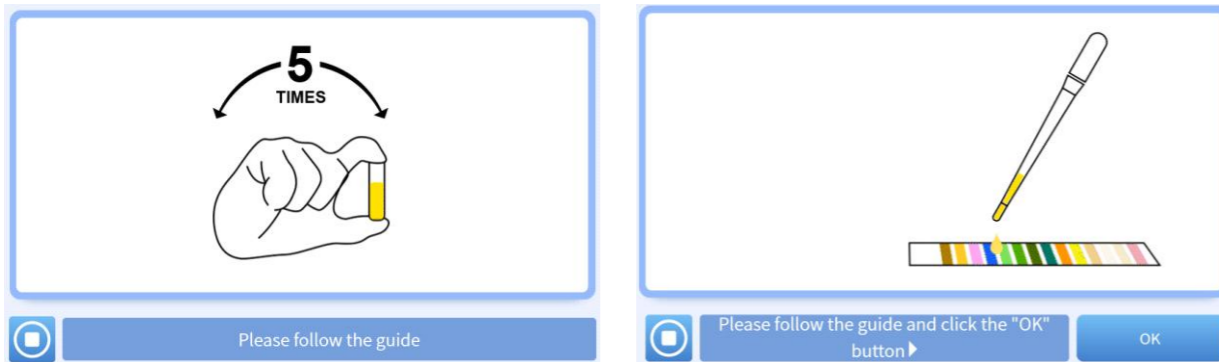


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AI-Libre Urinalysis Analyzer

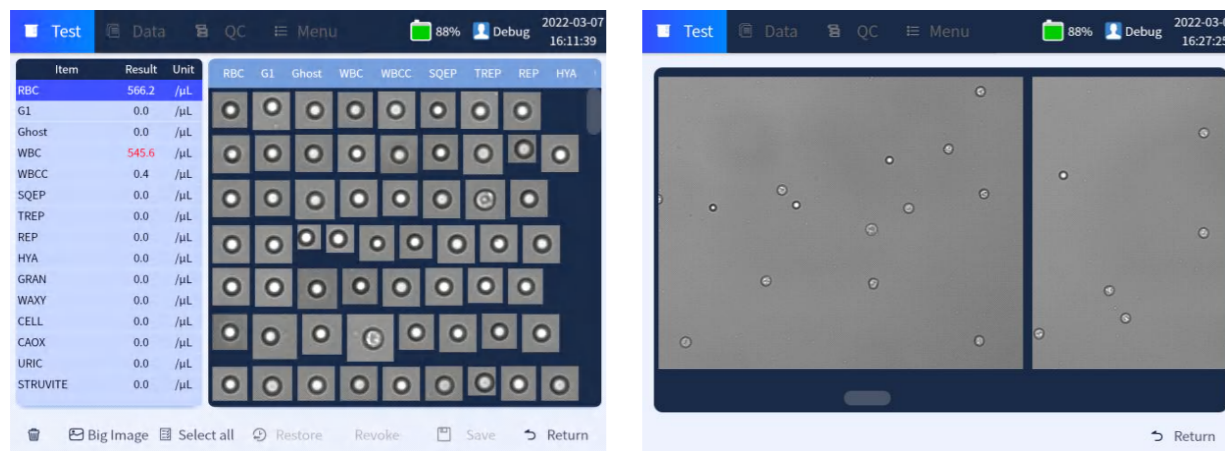


Dynamic Graphic Guidance



Automation of the Golden Standard

- Taking pictures with 40X magnification objective lens
- Provide raw full field images and individual particle images
- Two channels: one for testing, one for backup



Patient Info

Dry chemistry result

Physical parameters

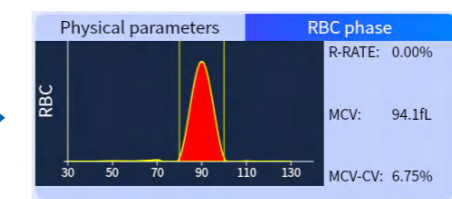
and

RBC phase

Dry chemistry		Urine sediment					
Item	Result	Reference	Item	Result	Reference	Unit	
WBC	+3	-	RBC	567.8	0-5	/μL	
KET	-	-	G1	0.0	0-5	/μL	
NIT	-	-	Ghost	0.0	0-5	/μL	
URO	Normal	Normal	WBC	550.5	0-5	/μL	
BIL	-	-	WBCC	0.0	0-5	/μL	
GLU	-	-	SQEP	0.0	0-10	/μL	
PRO	-	-	TREP	0.0	0-1	/μL	
SG	1.030	1.010 - 1.030	REP	0.0	0-1	/μL	
PH	5.0	5.0 - 7.5	HYA	0.0	0-2	/μL	
BLD	+3	-	GRAN	0.0	0-1	/μL	
Physical parameters		RBC phase					
Item	Result	Reference	Unit				
Color	Light yellow	Light yellow		WAXY	0.0	0-1	/μL
TUR	Clear	Clear		CELL	0.0	0-1	/μL
Cond	12.3	3.0-39.0	mS/cm	CAOX	0.0	0-5	/μL
OSM	415	600-1000	mOsm/kg	URIC	0.0	0-15	/μL
				STRUVITE	0.0	0-5	/μL
				AMOR	-	SQ	
				OTCRY	0.0	0-15	/μL
				CAST	0.0	0-15	/μL

Alarms

Sediment result





US-500 AI-Libre Urinalysis Analyzer



All in One

- Chemistry, sediment and physical analysis in one analyzer
- Robust yet compact



Easy maintenance

- Magnetic strip holder easy load and unload
- Auto focus without focus solution
- Auto clean function



AI Technology

- Deep learning system
- Multi-layer neural network (CNN), more intelligent
- Expanded learning and migration learning technology, more compatible
- Strong hardware enhanced (CPU+GPU, MCU+FPGA)



Less is More

- Routine consumption: detergent A and strips only
- Minimum machine space and liberate more for lab
- Sampling volume is only 0.6μL



Reagent Heritage

- Reagent: Detergent A, Detergent C, QC22, CA21, UQ11, 14
- Strip: 10G, 11G, 14G
- A new generation yet still compatible with original reagent
- Friendly for registration and stock management



Conductivity and Osmolality

- Evaluate kidney capability of concentrating and diluting urine
- Help to screen kidney damage at early stage
- Give indirect indication of kidney tubules and collecting tubules injury
- No interference from GLU, PRO
- No additional expense

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AI-Libre Urinalysis System

Principle	<p>Chemistry: Dual wavelengths reflectance photometry</p> <p>Sediment: AI recognition technology Automated microscope technology Digital imaging technology</p> <p>Conductivity: Electrical impedance method</p>
Parameters	<p>Chemistry strip parameters:</p> <ul style="list-style-type: none"> ●10G: LEU, KET, NIT, URO, BIL, PRO, GLU, SG, BLD, pH ●11G: LEU, KET, NIT, URO, BIL, PRO, GLU, SG, BLD, pH, VitC ●14G: LEU, KET, NIT, URO, BIL, PRO, GLU, SG, BLD, pH, VitC, MA, CRE, CA <p>System parameters: ACR (14G), PCR (14G)</p> <p>Sediment parameters: Automatic recognize 21 items: RBC, G1, Ghost, WBC, WBCC, SQEP, TREP, REP, HYA, GRAN, WAXY, CELL, CAOX, URIC, STRUVITE, AMOR, OTCRY, BACT, FUNGUS, MUCS and SPRM More items can be classified manually RBC phase: R-RATE, MCV, MCV-CV</p> <p>Physical parameters: Conductivity, Osmolality, COLOR (Manual input), TURBIDITY (Manual input)</p>
Throughput	Chemistry + Sediment: 25T/H Chemistry: 60T/H Sediment: 30T/H
Sample Volume	0.6mL
Wavelengths	470nm, 550nm, 620nm, 720nm

Sample	Urine
Strip	10G, 11G, 14G
Reagent	Detergent A, Detergent C, QC and Calibrator
Raw big picture	288 pictures for each sample
Camera Pixels	1.3 Million Pixels
Lens	40X
Report Unit	Chemistry: Plus, ENG, SI, CONV Sediment: / μ l, /HPF, /LPF, SQ Conductivity: mS/cm Osmolality: mOsm/kg
Voice Prompt	Yes
Print	Chemistry + Sediment + Physical parameters + RBC phase + Raw big picture
Interface	Net port, USB, VGA, HDMI, PS2, COM port
Results Storage	\geq 100,000
Weight	18.5kg
Dimension	465mm \times 270mm \times 405mm (L*W*H)