

USF-50
AI-Libre Urinalysis Analyzer

Principle	Chemistry: Dual Wavelengths reflectance photometry Sediment: AI recognition technology Automated microscope technology Digital imaging technology Conductivity: Electrical Impedance method
Parameters	Chemistry strip parameters: • 10G: LEU, KET, NIT, URO, BIL, PRO, GLU, SG, BLD, pH • 11G: LEU, KET, NIT, URO, GLU, SG, BLD, pH, VitC • 14G: LEU, KET, NIT, URO, BIL, PRO, GLU, SG, BLD, pH, VitC, MA, CRE, CA System parameters: ACR (14G), PCR (14G) 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 Physical parameters: Conductivity, Osmolality, COLOR (Manual input), TURBIDITY (Manual input)
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: /μl, /HPF, /LPF, SQ Conductivity: mS/cm Osmolality:mOsm/kg
Prompt	Yes
Print	Chemistry + Sediment + Physical parameters + RBC phase + Raw big picture
Interface	Net port, USB, VGA, HDMI, Ps2, COM port
Result Storage	≥ 100.000
Weight	18.5kg
Dimension	465mm x 270mm x 405mm (L*N*H)



USF-50
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

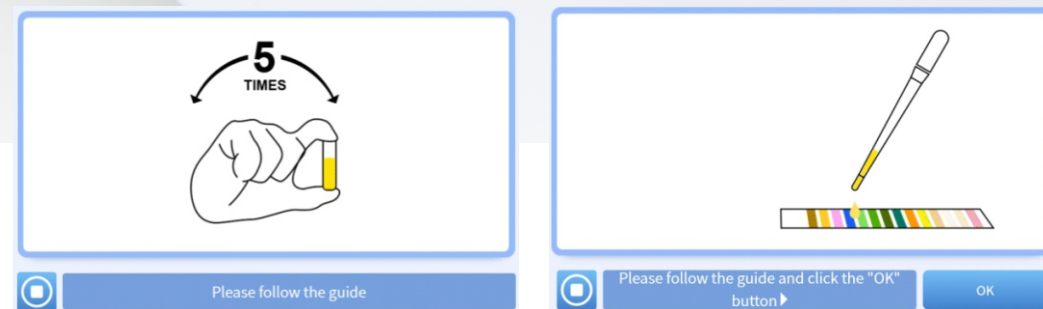


diagnosyf USF-50

AI-Libre Urinalysis Analyzer

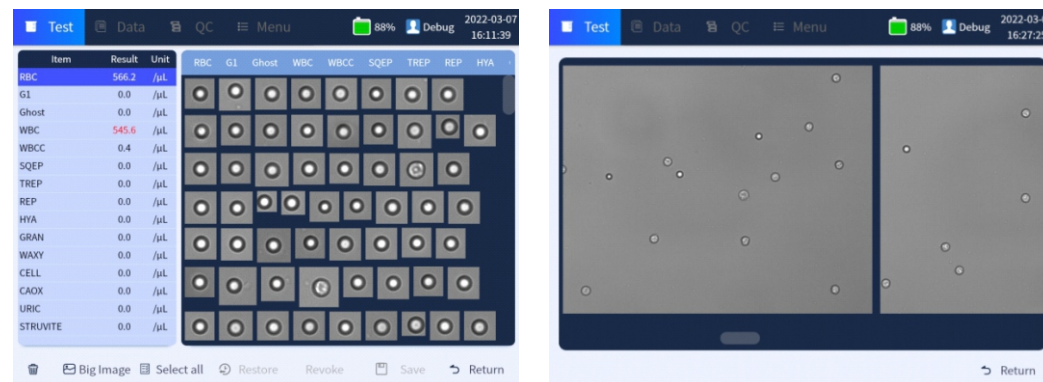


Dynamic Graphic Guidance



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



All in One

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



Less is More

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



Easy maintenance

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



Reagent Heritage

- Reagent: Detergent A, Detergent C, QC22, CA21, UQ11, UQ14
- Strip: 10G, 11G, 14G
- A new generation yet still compatible with original reagent
- Friendly for registration and stock management

Patient Info

Dry chemistry result

Physical parameters

and

RBC phase

Test					Data					QC					Menu					37% Admin 2022-03-02 17:21:34				
ID: 3 Name:																								
Dry chemistry					Urine sediment																			
Item	Result	Reference	Unit		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		Item	Result	Reference	Unit																
Color	Light yellow	Light yellow			R-RATE	0.00%																		
TUR	Clear	Clear			MCV	94.1fL																		
Cond	12.3	3.0-39.0	mS/cm		MCV-CV	6.75%																		
OSM	415	600-1000	mOsm/kg																					

Alarms

Sediment result



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)



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

