

## WHY AUTOMATE URINE SEDIMENT TESTING ?

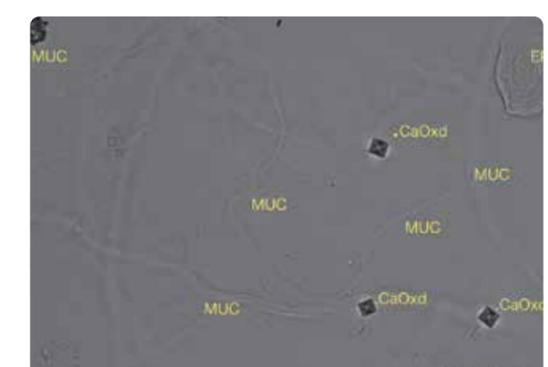
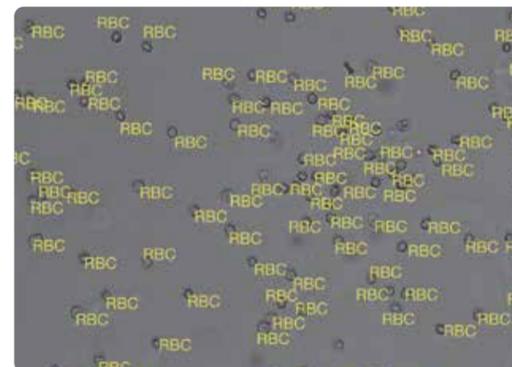
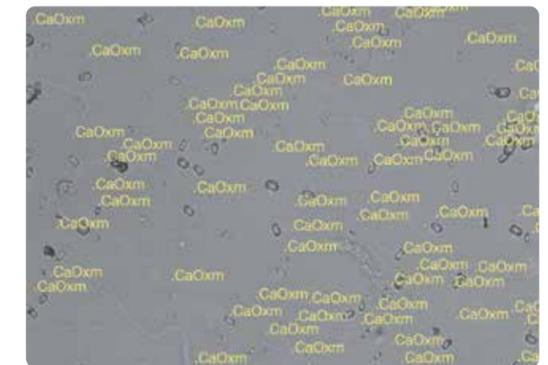
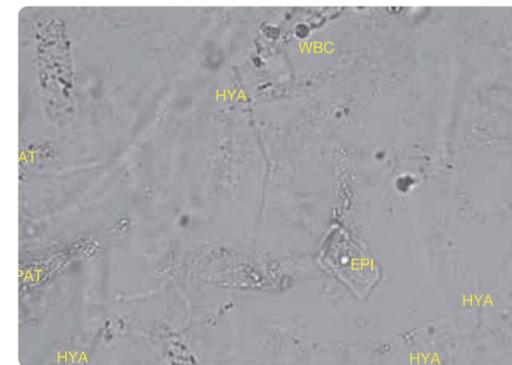
- Manual microscopy is a time-consuming process – approx. 10-12 mins for 1 sample
- Takes away too much time of “highly qualified” lab personnel which can be more effectively utilised
- Minimizes risk of Errors
  - Sample preparation
  - Slide preparation
  - Slide viewing
- Improves quality of reporting to doctors
  - Actual images of abnormal findings can be shared

Typical steps with time for 1 sediment test	
Sample Preparation	30 seconds
Create Work List	1 minute
Prepare Centrifugation	1 minute
Sample Centrifugation	5 minutes
Resuspend Sediment	1 minute
Drop Sample on Slide	30 seconds
Microscopic Analysis	1 minute
Cell Counting	30 seconds
Verify Results	30 seconds
Record Results	30 seconds
Key in Results	30 seconds
<b>Total</b>	<b>12 minutes</b>

Age	RESULT	UNIT	Reference	NAME	Reference
NAME	0.00	PUL	0.00-10.00	RESULT	UNIT
WBC	5.81	PUL	0.00-12.00		
CaOxm	0.00	PUL	0.00-6.00		
THI	0.00	PUL	0.00-6.00		
URI	0.00	PUL	0.00-6.00		
HYA	0.00	PUL	0.00-2.00		
PAT	1	PUL	0.00-0.50		
MEC	0.65	PUL	0.00-2.00		
EPI	1	PUL	0.00-5.00		
VEA	0.00	PUL	0.00-3.00		
MAC	2.61	PUL	0.00-130.00		
MDK	5.23	PUL	0.00-264.00		
SPH	0.00	PUL	0.00-12.00		

## Smart measurement system

- High-definition in-built cameras capture “whole view-field” images similar to HPF images of manual microscopy
- Latest “deep learning AI” technology identify, classify, label and count each sediment particle
- Large (13.3’) high-resolution touch-screen for viewing actual images



## AUTOMATION OF “GOLD STANDARD” MANUAL MICROSCOPY

### Instrument Technology

Automated microscopy using Accelerated Subsidence, Microscope Real Scene High Definition Image, Artificial Intelligence Recognition and Classification



### Simple, User-friendly Operation

- Fully automated sample preparation (sample mixing, centrifuging, preparation of homogenized layer) to minimize manual errors
- Large touch-screen helps zoom-in / zoom-out to access and review images and easily access the menu.
- Each test is processed in 1 cuvette – no carry-over between samples
- Just 1.5 mins testing time / sample

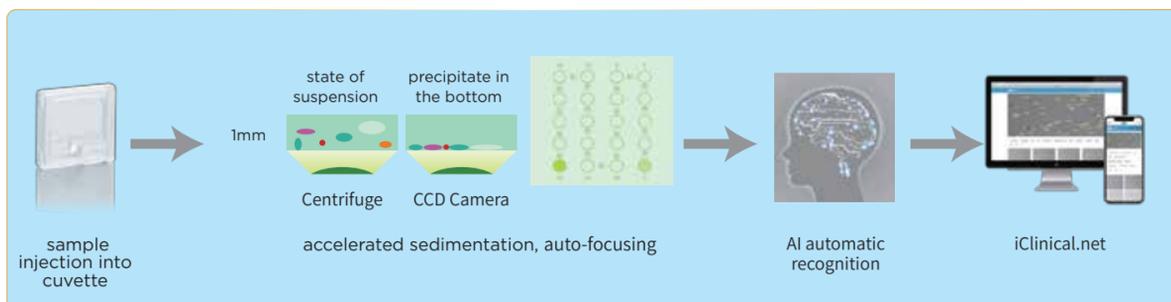


### Cost-effective solution

- Patented Cuvettes and distilled water are the only consumable – no other liquid reagents
- No inventory management issues
- Low maintenance as no tubings, valves etc needed
- Easy to calculate cost-per-test – cost of cuvette is cost of test



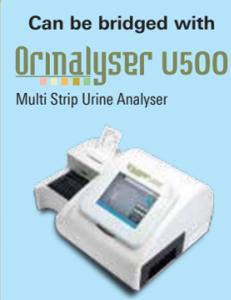
## MEASUREMENT PROCESS



The urine sample is injected into the cuvette by the aspiration needle from the test tube. The centrifugation process is performed at an acceleration level of 260G, creating a monolayer of particles at the bottom of the cuvette, to drive all the particles to the same level. Digital optical is used to record high resolution images of 10-20 positions, which are evaluated for various formed elements of the urinary sediment automatically by AI technology. With one-click, sample images with uncertainty can be uploaded to "iClinical.net" and get the experts answer immediately online.

## TECHNICAL SPECIFICATIONS

	COBIO®S50
Technology	Whole view field microscopic high-definition images Centrifugal accelerated sedimentation AI (Artificial Intelligence) identification
Detected partical classes	≥ 11 items: RBC; WBC; HYA; PAT; EPI; NEC; BAC; YEA; CRY; CaOxm; CaOxd; MUC
Memory	max 25,000 results (including all images)
Min. sample volume	2.0mL
Throughput	50 samples/hour
Batch size	single sample tube
Cuvette container	50 pcs
User interface	13.3' LCD with touch screen
Size	457x414x608mm(LxDxH)
Weight	30kg
Power	110-240 VAC, 50/60 Hz, 200 VA



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Smart & Simple Solution for Automating Urine Sediment Testing

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## Automated Urine Sediment Analyzer



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