

## TECHNICAL SPECIFICATIONS

<b>Strip analysis</b>	Method	Reflective photometry
	Input tray capacity	200 strips
	Waste container capacity	300 strips
	Optically visible area	130 x 40 mm (1200 x 250 pixels)
	Camera resolution	1280 x 960 pixels
<b>Sediment analysis</b>	Method	Automated Brightfield Microscopy with Advanced Element Recognition (ABM/AER)
	Camera resolution	1280 x 960 pixels
	Number of images	15 images/sample
<b>System throughput</b>	Chemistry only	240 samples/h
	Sediment only	180 samples/h
	Hybrid mode (Chemistry+Sediment)	Up to 100 samples/h
<b>Sample handling</b>	Memory capacity	> 500.000 results
	Rack size	10 tubes
	Sample load capacity	120 samples (12 full racks)
	Bar code	Code 128, EAN 8, EAN,13 ...
	Sample volume	Min. 2 ml, Aspirated < 0.8 ml
<b>Consumables</b>	Urine test strips	100 pcs vial
	Distilled water	10 liter container
	Cleaning solution	To be prepared in a 10l container
	Identification	RFID
<b>Humidity Protection</b>	Maintained humidity	40% RH below ambient
<b>Control system</b>	Display	23" Multi-touch screen
	Interfaces	RS232, 4 x USB, Ethernet, DVI
	OS	Windows 10
	LIS Interface	ASTM (RS232 + LAN)
	Printer interface	USB
<b>Operating conditions</b>	Location	Benchtop
	Temperature	16-30°C
	Humidity	10- 90 % non condensing
<b>Mains</b>	Dimensions (w x h x d)	943 x 563 x 675 mm
	Monitor dimensions	ca. 505 x 336 x 55 mm
	Weight	ca. 70 Kg
	Power suply	Input 100-240 VAC 50-60 Hz
	Consumption	Max 730 W

# Laura XL

## Fully-Automated Urine Analyser



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Contact info / map

## XL performance XS footprint

## Fully-Automated Urine Sediment Analysis

### SEDIMENT FEATURES

- Clear and sharp images of the actual appearance of elements simulating visual microscopy
- Element concentration on the bottom of a cuvette without centrifugation
- Automatic recognition of elements based on sophisticated artificial intelligence

### DETERMINED ANALYTES

**LAURA XL System** features the ability to auto-recognise the following general categories of urine sediment elements:

- White blood cells (WBC)
- White blood cell clumps (WBCc)
- Red blood cells (RBC)
- Dysmorphic red blood cells (dRBC)
- Squamous epithelium (SQEP)
- Non-squamous epithelium (NSE)
- Hyaline casts (HYA)
- Pathological casts (CAST)
- Calcium oxalate (CaOX)
- Triple phosphate (TRIP)
- Uric acid (UA)
- Bacteria - rods (BACR)
- Bacteria - cocci (BACC)
- Yeast (YST)
- Mucus (MUC)
- Sperm (SPRM)
- Unclassified category (UNCC)\*

\* A special category comprising e.g. deformed particles and other unrecognized elements which can be evaluated manually by the user.

Besides the auto-recognised categories, there are 16 additional element types that can be manually labeled during revision of the sample images.

### EVALUATION

**LAURA XL System** creates and stores 15 full viewfield sediment images of each urine sample. A sophisticated artificial intelligence is responsible for the auto-recognition of sediment elements on the pictures, resulting in fast and accurate classification and quantitative determination of the sediment content. Thanks to the advanced touchscreen operation, manual revision and evaluation of the images is very simple. In case of an ambiguous element, the Intelligent Element Zoom helps the operator to have a closer look.



**LAURA XL**  
Sediment

For laboratories, where only a fully-automated urine sediment analyser is desired, LAURA XL Sediment will be available!

# Laura XL Fully-Automated Urine Chemistry and Sediment Analyser



### ALL-IN-ONE FEATURES

- Automated homogenization and aspiration of urine sample performed only once
- Optional measuring modes: combined / chemistry only / sediment only
- Fast and simple maintenance

### PRE-ANALYTICAL PHASE AND MEASUREMENT

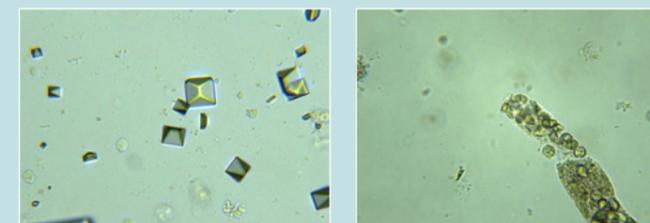
The only sample preparation to be done by the operator is to place the sample tubes filled with native urine into the 10-slot racks supplied with the instrument and then place the racks on the sample loader. From this point, the whole measurement process (homogenization, aspiration, pipetting, sedimentation, etc.) is automated, providing high accuracy and reproducibility of results.

### OUTPUT OF RESULTS

Measurement results can be transferred to the laboratory information system (LIS) or printed on a printer directly connected to the instrument.

### CLEANING AND DISINFECTION

Sediment cross-contamination is fully prevented by performing sample-to-sample cleaning automatically. Daily / weekly maintenance of the instrument is quick and simple.



## Fully-Automated Urine Chemistry Analysis

### CHEMISTRY FEATURES

- Accuracy of evaluation of test strips thanks to the precisely defined sample applicated on the reagent zone and Colour Matrix Definition technology
- Economical operation using only urine test strips as consumables
- Unique humidity protection of strips

### DETERMINED ANALYTES

Urine chemistry measurement in **LAURA XL System** is based on Dekaphan®, renowned urine test strip of Erba Lachema, providing the following parameters:

- Specific gravity (SG)
- Leukocytes (LEU)
- Nitrites (NIT)
- pH
- Proteins (PRO)
- Glucose (GLU)
- Ketones (KET)
- Urobilinogen (UBG)
- Bilirubin (BIL)
- Blood (BLD)

Additional parameters automatically measured for each sample:

- Colour
- Clarity

### UNIQUE HUMIDITY PROTECTION

A special desiccating system keeps humidity inside the strip feeder 40% below ambient conditions resulting in extended on-board stability of the strips.

### URINE STRIPS UNDER CONTROL

Erba Lachema offers its own urine control solution URINORM™. It is a 2-level control system (normal and pathological level) that covers all the parameters offered by PHAN® strips.



**LAURA XL**  
Comfort

For laboratories, where only a fully-automated urine chemistry analyser is desired, LAURA XL Comfort will be available!