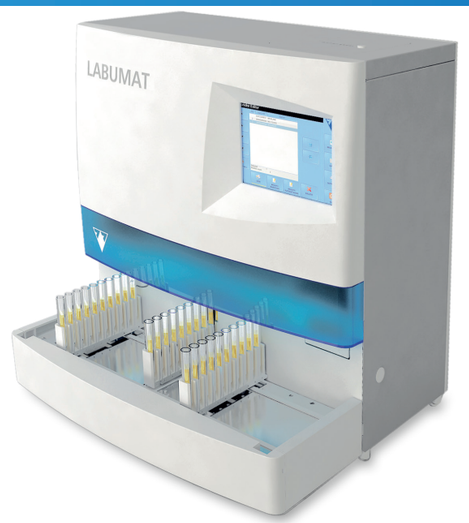
# LabUMat 2

- Throughput: up to 240 tests/hour
- Evaluates up to 12 chemical and 3 physical parameters
- Cost-effective operation without any special liquid reagents
- Low sample volume; liquid level detection
- Advanced, patented detection method
- Increased test strip capacity: up to 300 test strips
- Optional Kit: Increased on-board stability, up to 2 weeks



- Built-in PMC module (Physical Measurement Cell) for measuring physical parameters
- User friendly and flexible software; easy operation via color touch screen
- Streamlined documentation by LIS connectivity
- Automated QC analysis and self-check
- Software and language upgrades via USB stick
- RFID based rack identification




## Automated Urine Chemistry Analyzer

| Urine test strips for LabUMat 2 | Chemical parameters | | | | | | | | | | | | Calculated | | Physical parameters | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | BIL | URO | KET | ASC | GLU | PRO | BLD | CREA | pH | NIT | mALB | LEU | ACR | PCR | SG | Color | TUR |
| LabStrip U11 GL Plus | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | ■ | ■ | | ■ | | | ■ | ■ | ■ |
| LabStrip U12 mALB/CREA | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

## Proficiency and efficiency in urinalysis

The LabUMat 2 is a fully automated urine chemistry analyzer evaluating up to 12 chemical parameters with the available LabStrip urine test strips and 3 physical parameters. LabUMat 2 is a high quality and reliable instrument meeting the requirements of modern automated laboratories and providing walk-away operation. Easy operation via touch screen, automatic handling of test strips and test tubes – including sample mixing and precise dosing for each test pad by the pipetting unit – advanced detection technique and intelligent data management provide maximum efficiency while making urinalysis simple.

## About 77 Elektronika

77 Elektronika Kft. is a major global developer, manufacturer and supplier of in vitro diagnostic medical devices, mainly urine analyzers, rapid test readers, blood glucose meters and their consumables. The products are supplied worldwide under the 77 Elektronika brand and as OEM products for market-leading multinational companies. 77 Elektronika was established in 1986 and is headquartered in Budapest, Hungary (EU). The company is committed to providing premium products and services to the complete satisfaction of its customers.

CE For professional Use IVD

Management System ISO 9001 ISO 13485 ISO 14001 www.tuv.com

## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Methodology: | reflectance photometer, 4 discrete wavelengths |
| Test strips: | LabStrip U11 Plus GL; LabStrip U12 mALB/CREA |
| Evaluated parameters: | Bilirubin, Urobilinogen, Ketones, Ascorbic acid, Glucose, Protein, Blood, pH, Nitrite, Leucocytes Microalbumin (U12 strip only), Creatinine (U12 strip only), mALB/CREA ratio (U12 strip only), PRO/CREA ratio (U12 strip only), Specific gravity, Color, Turbidity |
| Max. throughput: | up to 240 tests / hour |
| Batch size: | 100 test tubes |
| Test strip capacity: | up to 300 test strips |
| On-board stability of strips: | up to 2 weeks (with optional kit) |
| Min. sample volume: | 2.0 ml (checked by liquid level sensor) |
| Memory: | max 10,000 results |
| Display: | 7", 800x600 TFT |
| Size: | 600x560x640 mm (WxDxH) |
| Weight: | 55 kg |
| Input: | 100 - 250V AC / 50-60 Hz |
| Power consumption: | max 200 W |
| Interfaces: | USB, RS232 serial port, PS2, DisplayPort and DVI-D connection |
| Barcode reader: | built-in barcode reader |

URP-9303-5

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# UriSed 3 PRO




## Automated Urine Sediment Analyzer

## New PHASE with CONTRAST

- Revolutionary optical system combining bright-field and phase contrast microscopy
- The only consumable is the UriSed cuvette
- No need for liquid reagents or calibrators
- Throughput: up to 150 tests/hour
- Dual-view for both bright-field and phase contrast images
- Zoomable HPF-like images
- Improved consumable traceability: RFID based cuvette and rack identification
- Fully automated sample preparation requiring only low sample volume
- Live view mode: Real-time view of any viewfield of the cuvette to observe microorganisms in motion
- Automated QC analysis and maintenance procedures
- UriSed 3 PRO and LabUMat 2 together make a Complete Urine Laboratory System
- Streamlined documentation by LIS connectivity

UriSed 3 PRO provides a uniquely advanced visualization and recognition of formed elements in urine sample using a special, patented combination of bright-field and phase contrast microscopy by automating the gold standard method of sediment analysis.
It improves differentiation of hyaline casts, red blood cells, crystals, yeast and overall diagnostic performance in central screening laboratories as well as in specialist laboratories.

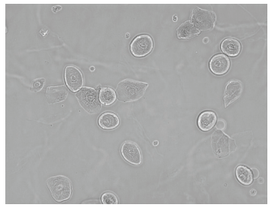
URISED TECHNOLOGY

UriSed instruments are based on the UriSed technology, which represents a premium category solution for sediment analysis, providing high resolution, whole view field microscopic images in an automatic and reproducible way. The goal of UriSed Technology is to make the urinary sediment analysis faster, more reliable, more operator independent and independent of the manual microscopy.

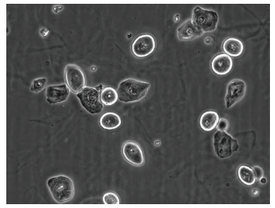
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# Urine particles with never-seen-before definition and clarity

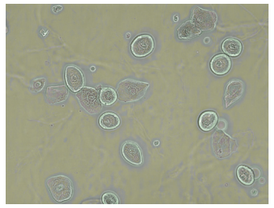
Bright-field image



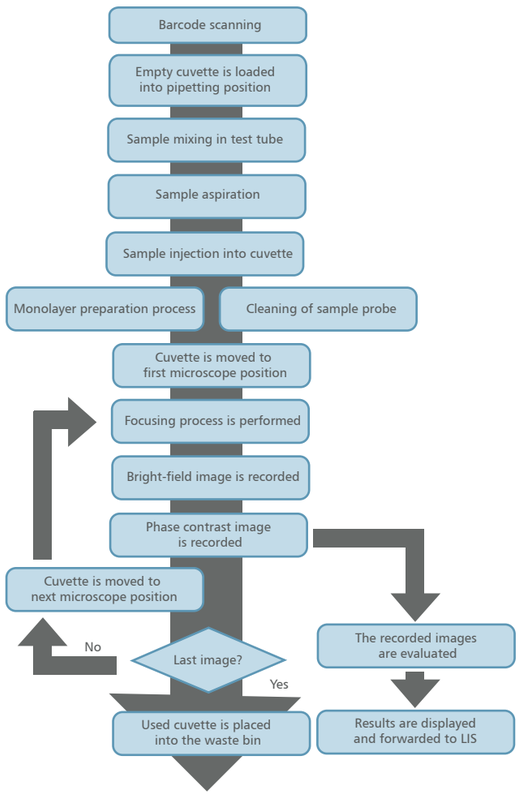
Phase contrast image



Composite image



## Measurement process




## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Auto-detected particle classes: | Red Blood Cells (RBC); White Blood Cells (WBC); WBC Clumps (WBCc); Hyaline Casts (HYA); Pathological Casts (PAT); Squamous Epithelial Cells (EPI); Non-Squamous Epithelial Cells (NEC); Bacteria Cocci (BACc); Bacteria Rods (BACr); Yeast (YEA); Mucus (MUC); Sperm (SPRM); Crystals (CRY): Calcium-oxalate monohydrate (CaOxm), Calcium-oxalate dihydrate (CaOxd), Uric acid (URI), Triple phosphate (TRI), Amorphous material (AMO), RBC ghost and RBC-Aca flags. |
| Further classes for manual subclassification are also available! | |
| Technology: | Cuvette based automated microscopy and image processing |
| Consumable: | UriSed cuvette |
| Consumable traceability: | with RFID tag |
| Memory capacity: | 10,000 results (including all images) |
| Throughput: | Up to 150 tests/hour |
| Magnification: | Zoomable HPF-like images |
| Displayed images: | Phase contrast, bright-field and composite |
| Min. sample volume: | 2.0 ml (checked by liquid level sensor) |
| Batch size: | 100 test tubes |
| Barcode reader: | Built-in |
| Printer: | Optional, external (connected to operating PC) |
| Interfaces: | USB, LAN, RS232 serial port |
| LIS connectivity: | LIS2-A2 or HL7 |
| Size: | 600x560x640 mm (WxDxH) |
| Weight: | 63 kg (without operating PC) |
| Power (measuring unit): | 100-240V AC / 50-60 Hz / max. 200 W |

The operation of the instrument is based on the patented UriSed Technology. Working without any special liquid reagents, UriSed 3 PRO performs sample preparation, produces whole view field microscopic images and evaluates them using the Artificial Intelligence-based Evaluation Module (AIEM), an advanced image processing software.
Using the phase contrast technology UriSed 3 PRO provides improved performance. It has outstanding visualization and recognition capabilities for every particle type even the ones that conventional bright-field microscopy cannot easily detect (such as casts and ghost red blood cells). The RFID based identification process ensures easy registration of cuvettes as consumables on the instrument and allows traceability between measurement results and consumable lots. UriSed 2 and UriSed 3 can also be upgraded with RFID based consumable traceability.

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# LabUMat 2 & UriSed 3 PRO
# The Automated Urine Laboratory System

## Urine chemistry and sediment analysis in one system: up to 150 tests per hour




The LabUMat 2 urine chemistry analyzer and UriSed 3 PRO microscopic urine sediment analyzer connected together enable laboratories to have a completely automated urinalysis system. The integrated solution accelerates the laboratory throughput and provides an effective and reliable solution for urine analysis. The system handles the sample forwarding, sample preparation, measurement process, sample analysis, reporting and result review with the microscopic images. The results of urine chemistry and sediment analysis are stored in a unified database.

The new **pediatric mode** is available both for LabUMat 2 and UriSed 3 PRO, enabling the chemical or sediment measurement of 1mL sample, that can be further reduced to 0.8 mL with pediatric tubes for each instrument. In case of the connected system in pediatric mode only 1.25 mL sample is needed to carry out the measurement, that sample volume can be further reduced to 1 mL with pediatric tubes.

## Higher throughput with the Cascade configuration: up to 200 tests per hour




The UriSed Cascade configuration enables the use of two UriSed 3 PRO devices with the LabUMat 2 thereby providing an ideal solution for high-throughput laboratories with up to 200 tests/hour.

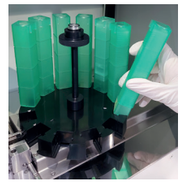
## All you need for complete urine analysis

LabUMat 2



LabStrip U11 Plus GL or LabStrip U12 mALB/CREA

UriSed 3 PRO



Cuvettes for UriSed 3 PRO

Cleaning and sample preparation




Distilled water



Standard test tubes

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