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# Urilyzer® Cell

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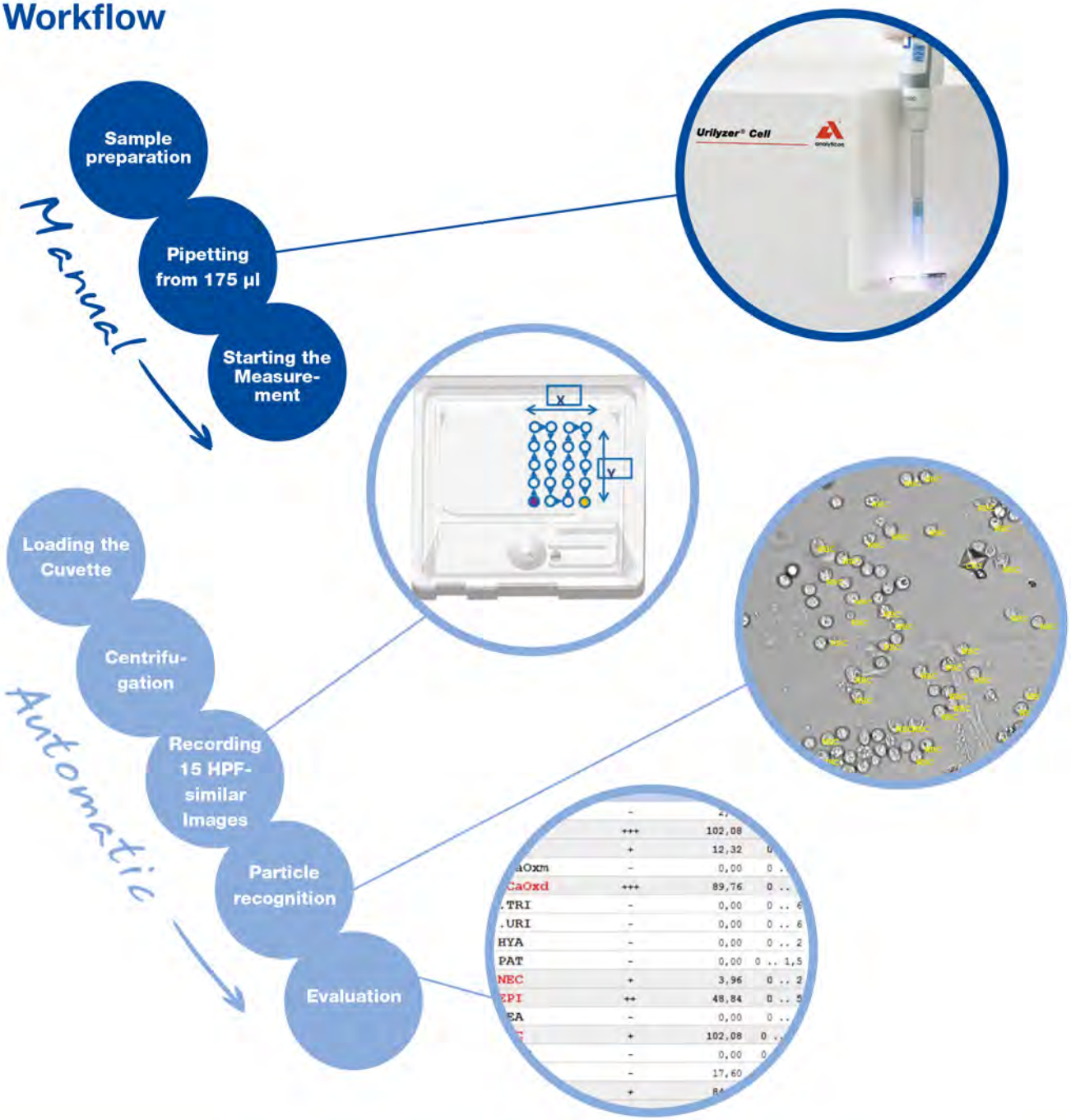
## Automate your urine sediment analysis!


- Easy-to-use
- Sample volume ~ 175 µl
- Complete measurement in less than one minute
- Automatic creation of HPF-like brightfield images
- No additional reagents required
- Automatic identification of urine particles
- Real-time microscopy possible in manual microscopy mode
- Connection to a middleware, LIS or urineteststripanalyzer
- User-friendly application software for data processing, result validation and generation of complete analysis reports
- Suitable for laboratories and Doctor's offices with limited space

## Compact, Reliable, Time saving

The Urilyzer® Cell is a semi-automated urine microscopy analyzer for professional use. Real-time microscopy is also possible in manual microscopy mode. The Urilyzer® Cell increases the reproducibility and accuracy of urine sediment analysis based on the gold standard method. The automation of time-consuming sample processing simultaneously enhances productivity. Its compact design and ease of use make the Urilyzer® Cell ideal for use in medical practices and small laboratories.

## Workflow



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# Artificial Intelligence-based Evaluation Module (AIEM)

After manual pipetting of the sample into the cuvette, sample processing and microscopy are performed automatically. The microscopy module creates HPF-like brightfield images that are automatically evaluated by a neural network based image processing software algorithm called AIEM, which automatically classifies and counts the urine sediment particles in the images.


Experience report
Urology Centre North Hesse, Kassel

***"Significantly faster, significantly better."***

This is the conclusion of the Urology Centre North Hesse in Kassel after the introduction of the Urilyzer® Cell for automated urine sediment analysis in routine diagnostics.

The Urology Centre North Hesse is a modern urological practice with a throughput of 50 to 100 urine sediment analysis per day. Previously, urine sediment analysis was performed manually. In order to optimize the time-consuming manual processing of the samples, eight samples were centrifuged simultaneously, followed by manual microscopy of each sample.

After presenting the Urilyzer® Cell, the interest of the urological practice was awakened and the efficiency in the daily laboratory routine was examined in a demo setting. The employees started using the device without any expectations and initially carried out parallel measurements to investigate the comparability of the two methods. From each sample examined, both a manual urine sediment and an automated analysis with the Urilyzer® Cell were carried out. It quickly became apparent to the employees that the results of both methods were correspond. " The results are just as good, if not better," was the assessment of the Urology Centre North Hesse. Shortly, the urine sediment analysis was completely changed to the Urilyzer® Cell, because "You can trust the device, it is really good", the practice confirmed.

The time savings and the intuitive and simple operation of the device, as well as the accurate results, were decisive for the decision to integrate the Urilyzer® Cell into the daily routine of the practice. The changeover to the semi-automatic urine sediment analyzer took place within one day. The work-intensive steps of manual urine sediment analysis can be reduced to 1 minute per sample with the urine sediment analyzer. Since the Urilyzer® Cell carries out all steps from sample processing to evaluation of the results fully automatically, the user can concentrate on other activities during this time.

***"We won't give the Urilyzer® Cell away and definitely recommend it to others - we are happy to have the device!"***

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Connectivity:

By connecting an Urilyzer® 100 Pro or 500 Pro and linking it to an LIS or middleware, you get a fully comprehensive urine analysis. In less than 3 minutes, both the urine test strip result and the associated sediment result can be viewed in the patient file.

# Technical Specifications

| | |
|---|---|
| Type | Semi-automated urine sediment analyzer |
| Measuring technology | Cuvette-based automatic microscopy and image processing |
| Parameter | Red Blood Cells (RBC), Leukocytes (WBC, WBCc), Hyaline Casts (HYA), Pathological Casts (PAT), Squamous Epithelial Cells (EPI), Non-Squamous Epithelial Cells (NEC), Bacteria (BAC, BACr, BACc), Yeast (YEA), Crystals (CRY) [Calcium-oxalate monohydrate (CaOxm), Calcium-oxalate dihydrate (CaOxd), Uric acid (URI), Triple phospate (TRI)], Mucus (MUC), Sperm (SPRM)<br>Further classes for manual subclassification are available |
| Throughput | Up to 60 tests/hour |
| Sample volume | ~ 175 µl |
| Data storage | Up to 5.000 results (including images) |
| Display | Monitor, external (included in scope of delivery) |
| Interfaces | USB, Ethernet, RS 232 |
| Dimensions | 305 x 315 x 325 mm (WxDxH) |
| Weight | 10 kg |
| Power supply | 100-250V AC / 50-60 Hz / max. 100W |
| Operating environment | Temperature: +15°C to +40°C<br>Relative humidity (non-condensing): 20% to 80% at 30° C |
| Printer | Optional, external |
| Barcode reader | Optional, external |
| Protocols | LIS2 (ASTM+), HL7 |
| Features | • Integrated centrifuge, integrated microscope<br>• User management with different access rights<br>• Barcode identification<br>• Automatic validation of results<br>• QC- Management |
| Languages | German, English, French, Italian, Spanish, Portuguese, Turkish, Polish, Czech, Slovak, Hungarian, Russian |

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# Urilyzer® 100 Pro

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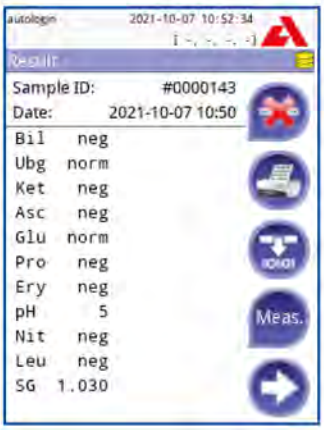
## A new way in urinalysis

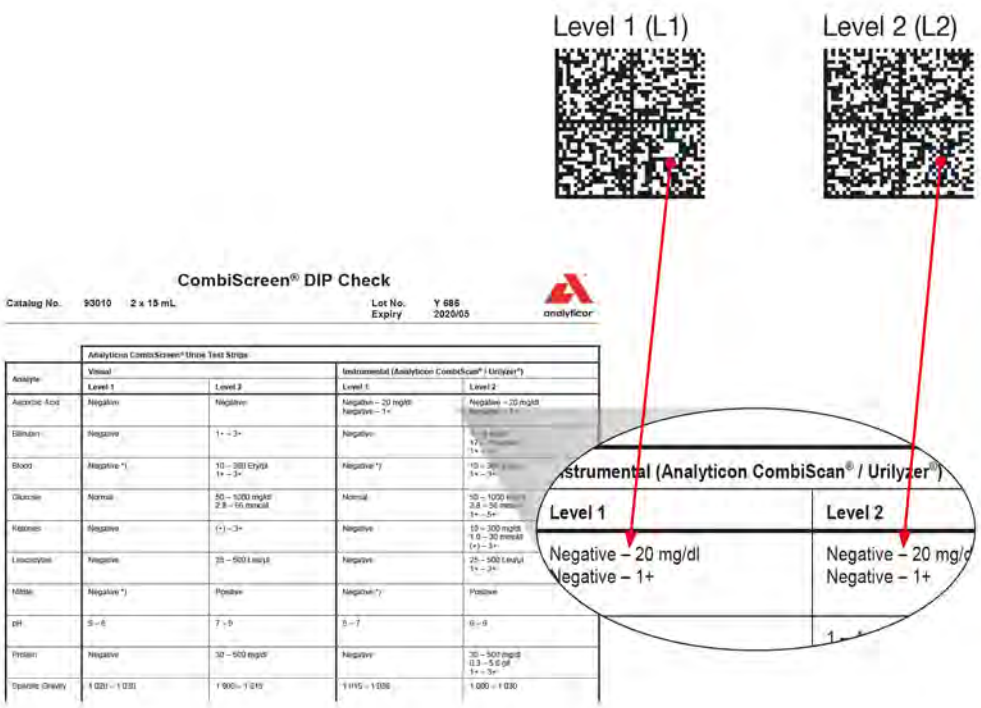

- Easy-to-use
- Smart and safe operation
- Extended connectivity capabilities
- POCT-features

## Easy-to-use

- A Start-Up Wizard leads the operator through the user-defined settings upon first start of the device.
- Automatic start of the measurement after placing the urine test strip allows hygienic and clean operation of the analyzer
- Positive results, reminders and warnings are shown in color (e.g. red or yellow) and can be easily identified
- The user interface offers a high level of customization with flexible testing and reporting options



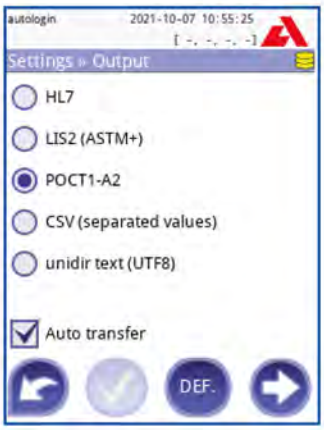






## Smart and safe operation

- Tracking of LOT-No. for urine strips and quality control solutions
- Data management provides multiple filter options
- QC ranges can be entered via QR-Code
- Automated QC analysis with customizable QC test reminders including lockout function
- System allows the allocation of different security levels to individual users







## Connectivity capabilities

- Data can be transferred via serial connection or Ethernet
- A variety of interfaces for connecting external barcode scanner and/or keyboard (USB or PS2)
- Implemented protocols: HL7, LIS2 (ASTM+), POCT1-A2


## POCT1-A2 features

- Validated for use with Siemens UniPOC™ and POCcelerator™*
- Remote configuration via middleware
- Automated synchronization of date and time via the middleware
- Messaging function allows the POCT datamanager to send messages to addressed operators or instruments
- Positive Patient Identification (PPID)
- Remote software update
- Test strip management
- QC solution management
- Proficiency test feature

* please contact us for other middleware options

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# Technical Specifications

| | |
|---|---|
| Type | Semi-automated urine test strip analyzer |
| Measurement technology | Reflectance photometer with 4 discrete wavelengths 505, 530, 620, 660 nm |
| Parameters | 11 Parameter: Bilirubin, Urobilinogen, Ketones, Ascorbic Acid, Glucose, Protein (Albumin), Blood (Hemoglobin), pH, Nitrite, Leucocytes, Specific Gravity<br>7 Parameter: Ketones, Glucose, Protein (Albumin), Blood (Hemoglobin), Nitrite, Leucocytes, pH<br>5 Parameter: Glucose, Protein (Albumin), Blood (Hemoglobin), Nitrite, Leucocytes<br>2 Parameter: Albumin, Creatinine |
| Throughput | Up to 50 tests/hour (in normal mode) Up to 120 tests/hour (in fast mode) |
| Data storage | Patient database: 3.000 tests QC database: 1.000 tests |
| Display | 3.5" QVGA touchscreen LCD |
| Interfaces | Serial RS232, USB Type A, USB Type B, PS2 (external keyboard, barcode reader), Ethernet |
| Dimensions | 208 x 290 x 80 mm (WxDxH) |
| Weight | 1.2 kg |
| Power supply | 7.5 V DC / 3 A |
| Operating environment | Temperature: +15°C to +32°C<br>Relative humidity (non-condensing): 30% to 80%<br>Atmospheric pressure: 70 kPa to 106 kPa |
| Printer | Built-in thermal printer |
| Barcode reader | External |
| Protocols | LIS2 (ASTM+), HL7, POCT1-A2 |
| Features | • Start-Up Wizard upon first usage<br>• Operator Management with advanced system security options<br>• Test strip & QC Management (full traceability via LOT and Expiry entry)<br>• Data Management, Power Management<br>• Autostart of measurement (automatic strip detection)<br>• Automatic printout or transfer of result<br>• Flexible advanced information entry (e.g. sample color and turbidity)<br>• Flexible advanced testing and reporting options (e.g. sediment recommendation flag) |
| Laguages | Czech, Danish, English, Finish, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Romanian, Russian, Spanish, Swedish |

Art.-No.: UL0100Pro