

HumaVision

Innovative AI-based urine microscopy

Urinalysis provides essential insights into various bodily functions and is routinely performed as a basic screening test for nearly all patients.

Key Features

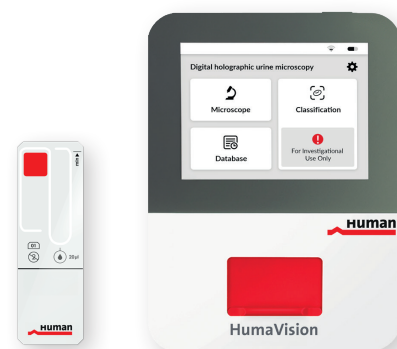
- Type: Automated urine particle analyzer.
- Technology: Digital Holographic Microscopy (DHM) + AI for particle analysis.
- Sample type: Native Urine (unique) – no manual preparation.
- Display: 3.5-inch touchscreen.
- Images: 2048 x 2048 pixels.
- Time to result: 2-7 minutes.
- Connectivity: LIS, WIFI and Hotspot-function. PDF-result export.
- Portability: Weight: 240 g and battery run time: 2-5 hours.

Consumables

- Urine sample carrier (100 glass slides), REF 17661
- Sensor cleaner sticks, REF 17662

Advantages

- The smallest, most comfortable urine microscope on the market.
- Speed & Accuracy:
 - > 80% faster than manual microscopy with minimized error risks.
 - > AI based differentiation and quantification.
 - > Native urine analysis ensures accuracy by preventing the potential loss of erythrocytes, leukocytes, or epithelial cells during centrifugation.
- Automation: Digital reporting, fewer manual steps, and consistent results.
- Portability: Lightweight, battery-operated for various healthcare settings.
- Ease of Use: Intuitive touchscreen interfaces and minimal cleaning/maintenance.



Digital Holographic Microscopy (DHM) in combination with AI particle count.

- Is revolutionizing the urine diagnostics.
- DHM uses light diffraction to create holograms that reveal details of blood cells, crystals, or casts within the sample.
- DHM technology considers a 13 times higher field of view than microscopy – more representative.
- Instead of 2D info by eye, 3D plus phase information is applied by DHM.
- Advanced artificial intelligence algorithms analyze particles in 3D, reduces interobserver variability of manual microscopy.
- The technology enables precise quantification of urine particles.

Key Benefit: Innovation in particle analysis with AI and DHM, offering high accuracy and instant results without extensive preparation and interobserver variations

HUMAN

Diagnostics Worldwide

HumaVision

Positioning

Replacing manual microscopy

Saves time, saves money (80% faster)

- No centrifugation, less pipetting, no sedimentation tube
- No manual differentiating and counting of particles (ideally > 5 spots)
- No typing errors, but automatic, storage, exchange of results

Errors avoided by HumaVision

- No loss of cells during centrifugation
- No interobserver variability
- 3D instead of 2D size/shape differentiation and phase-information
- Field-of-view 13 times larger than manual microscopy, more representative for the entire sample
- Quantitative results (missing counting chamber)
- No typing errors, loss/mismatch of results
- Second look possible (dried out slide)
- High standardization (defined result intervals and normal ranges)



Competing against automated systems like Uri Sed Mini

Saves costs

- Low instrument investment
- No lab space needed
- Integrated PC, screen and keyboard
- WIFI and Hotspot digital data exchange
- Print or zoom via PDF
- No maintenance by service technician

Errors avoided by HumaVision

- No loss of cells during centrifugation or in a flow cell, due to use of native urine and no centrifugation inside
- Unique phase information (DHM) for better particle differentiation
- Volumetric count instead of assumption, that all particles are centrifuged down to the focal plane (double layers are possible)

