

Product Note M155 - 06/15

A250/D-K ALPHA Kidney Stone Analyzer



System for the identification of the main chemical components in kidney stones.

The ALPHA Kidney Stone Analyzer is a system for the quick and reliable identification of the main chemical components in kidney stones by FT-IR spectroscopy. Simple sampling (figure 1) and the intuitive design of the software user interface allows operation by personnel without IR spectroscopic knowledge.

Guided by the software (see figure 2) the user places a few small pieces of the kidney stone on the diamond measurement interface and starts the IR-measurement. The identification of the components in the kidney stone sample is performed by automated search of the resulting spectrum in a dedicated spectral library containing > 5,000 spectra of authentic kidney stones. A clear report (hardcopy, pdf or csv file, see figure 3) of the identification result finalizes the analysis.

The total analysis time including sampling, measurement, identification, and report generation is about 1 minute.



Figure 1: A kidney stone sample is being pressed on the diamond ATR crystal.

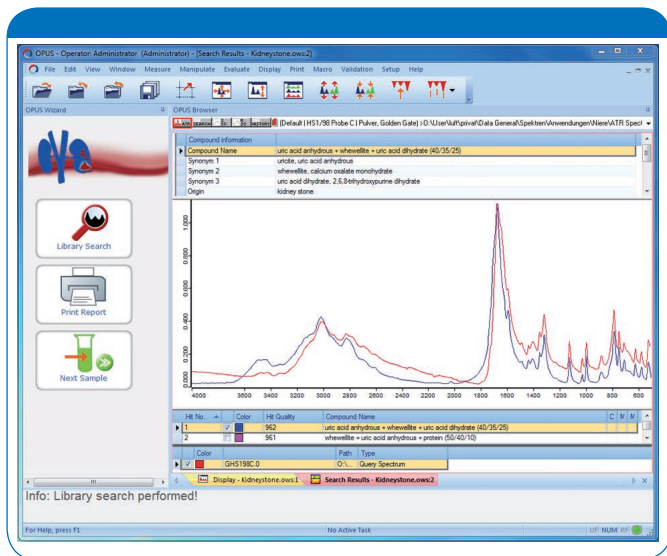


Figure 2: Software user interface of the ALPHA Kidney Stone Analyzer showing the identification result of an analyzed kidney stone.

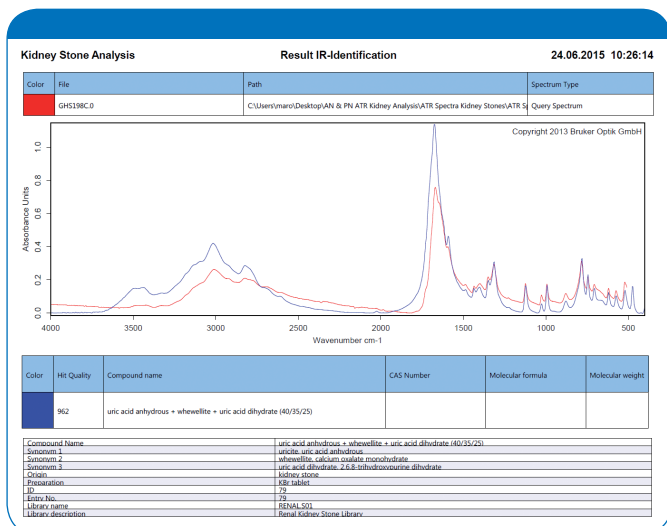


Figure 3: Example report of a kidney stone identification.

Product description

System specifications:

- Robust and compact ALPHA FT-IR spectrometer system with diamond-ATR measurement interface
- Intuitive software user interface, dedicated work-flow for the analysis of kidney stones
- Extensive spectral library containing reference spectra of >5,000 authentic kidney stones
- Small footprint: 22x30 cm (including sampling module)
- Weight: approx. 7 Kg
- RockSolid^(TM) interferometer: gold mirrors, high throughput, permanent alignment
- Automated instrument tests with integrated polystyrene standard
- Sealed and desiccated optic, desiccant reclaimable
- PerformanceGuard: continuous monitoring of all spectrometer components, performance and humidity
- Diamond ATR crystal, single reflection, edged in tungsten carbide, allows measurement of particularly hard samples
- Work disk: stainless steel plate
- Ergonomic one-finger clamp mechanism
- Pressure control
- Working distance (max. sample height) 20 mm
- Easy cleaning due to 360° rotation of pressure applicator

Included:

- ALPHA-P FT-IR spectrometer system with Platinum-ATR sampling module
- Dedicated software wizard for kidney stone analysis (1021546).
- BLG-2 Kidney stone library
- O/IR OPUS spectroscopic software for a time-saving and reliable FT-IR- analysis

Options:

- W303/D-U Extension for operation in regions with high humidity
- O/SR-N OPUS/SEARCH software package for unlimited search functionality (e.g. mixture analysis, information search, set-up of spectra libraries)
- Validation according to GMP; US, European and Japanese Pharmacopeia; 21 CFR Part11 compliance