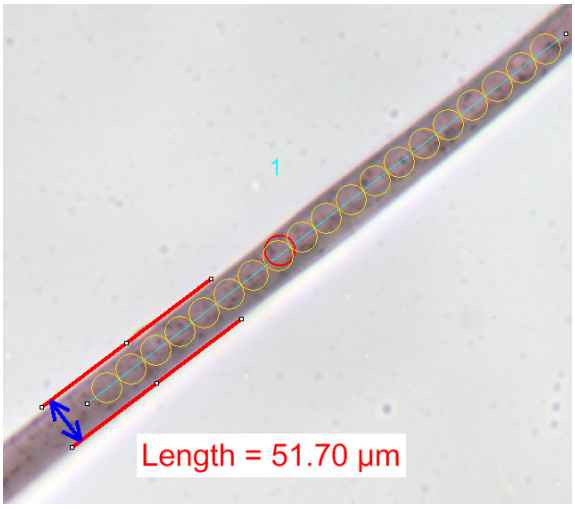
MicroSpectra

SYSTEM FOR MICROSPECTROMETRY

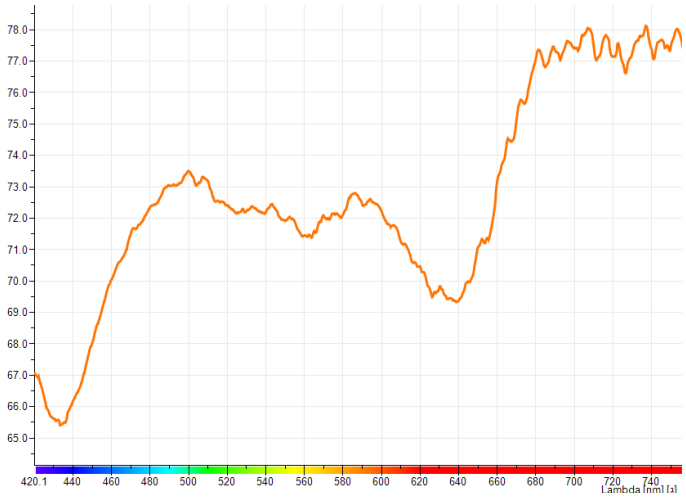
Combination of a fully equipped scientific grade Nikon microscope with a high precision motorized stage and a quality spectrometer guarantees an universal microspectrometry solution for analysis of various forensic traces including fibres, paint chips or inks. Camera image (approximately 3.2 × 2.0 mm for 5x objective) and spectrum of a defined area within the camera image (circle with a typical diameter of 40 µm for 5x objective) are viewed simultaneously. The spectrometer probe size can be tuned to the requested lateral resolution by selecting a proper pinhole on the optical fiber mount. A simple click within the camera image will move the sample spot directly into the spectrometer view with 1 µm precision. Any number of points within the whole sample can then be marked, automatically scanned and averaged to obtain the final spectrum. Transmittance/reflectance, absorbance and colorimetry modes are available. Acquired spectra can be stored into the database for archiving, exported into MS Excel or transformed into a simple PDF report.

HIGHLIGHTS

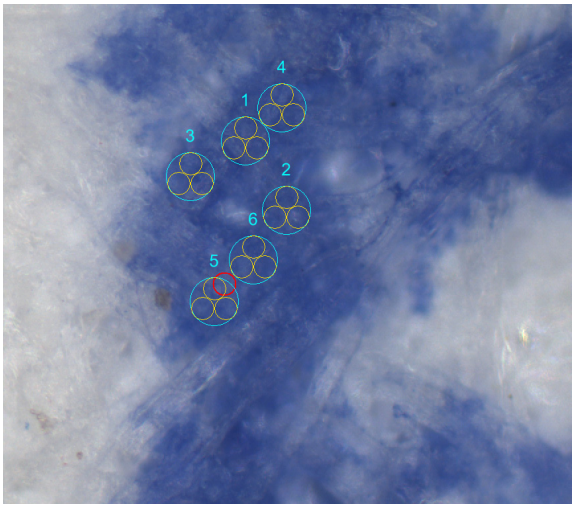
- Versatile spectrometer for near UV-Vis – near IR spectroscopy
- Optical fiber having an adjustable mount with an exchangeable pinhole
- 2.3 MP color CMOS camera allowing a simultaneous live camera image
- High precision and repeatability (1 µm) XY stage with a long travel range (up to 100 mm)
- Precision stage control (joystick or single click in the software)
- Modular versatile Nikon microscope for brightfield/darkfield microspectroscopy with episcopic and diascopic illumination, polarized light microscopy including a set of objectives (5x – 40x) and fluorescence microscopy (optional)
- All-in-one software integration – live spectrum, live camera image, stage control, definition of scanning points, automatic scanning, spectrum analysis and reporting



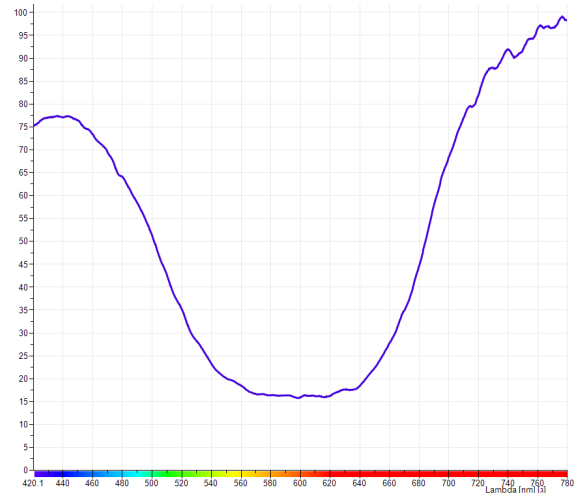
Fibre



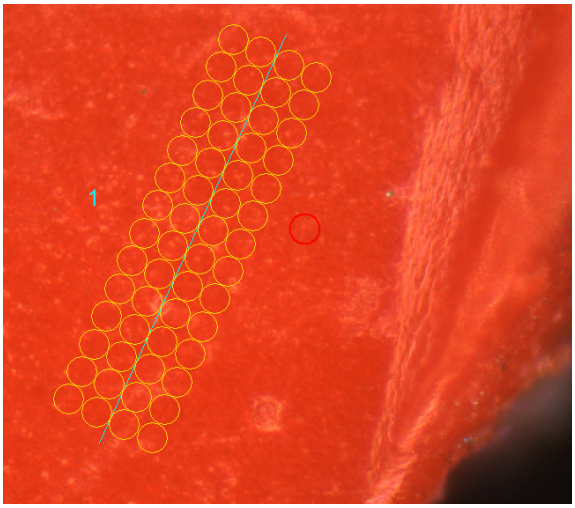
Transmittance measured in brightfield, diascopic illumination



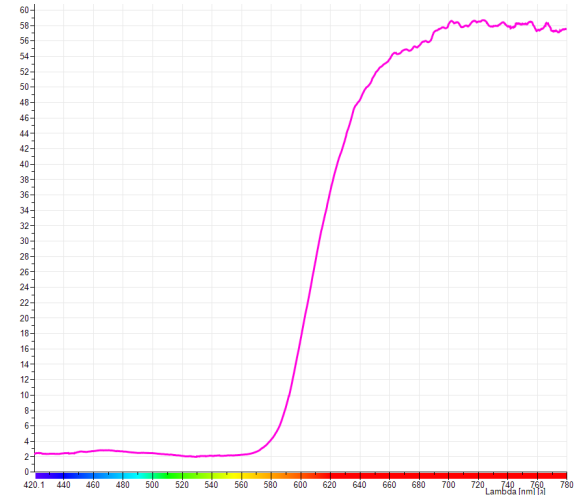
Stamp ink



Reflectance measured in darkfield, episcopic illumination



Paint chip



Reflectance measured in darkfield, episcopic illumination