Hellma® Solutions
For Dedicated Spectroscopy Solutions

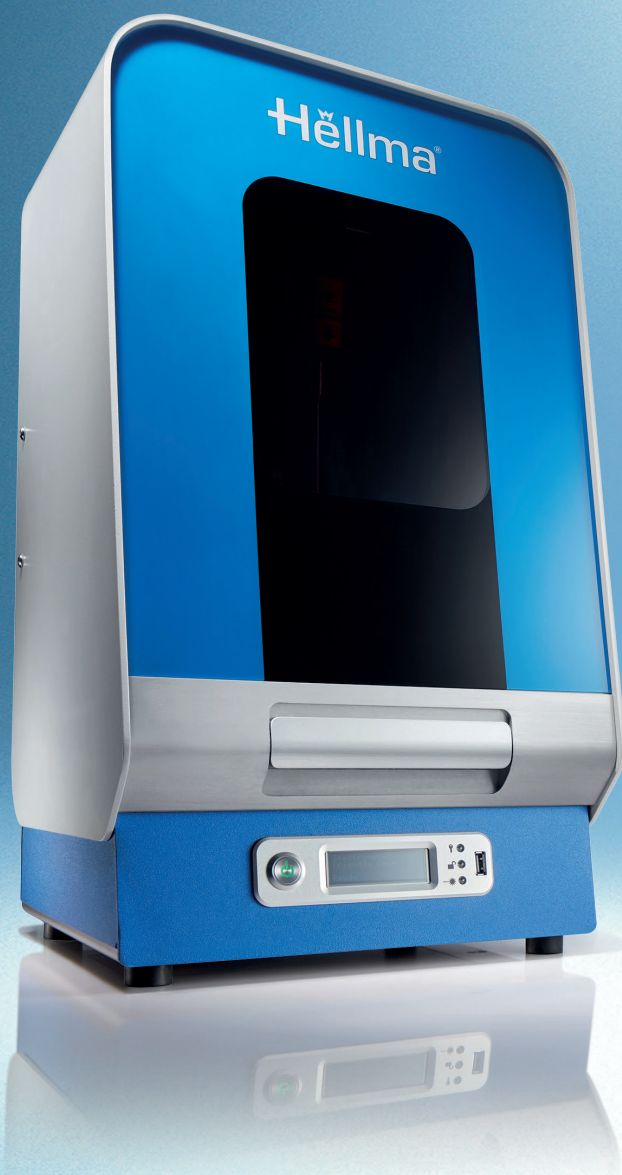Hellma®

Reva
Educational Raman

The fully integrated solution for learning Raman spectroscopy

For academic teaching in Universities and Colleges
Simple, safe and practical
Includes example pre-configured experiments

A technology on the pulse of time

Historically, the initial adopters of Raman spectroscopy have been physical and materials scientists and chemists. More recently however Raman technology has found application in the bio-scientific communities, the medical sector and most importantly in pharmaceutical science and forensics.

This growth in Raman technology has been supported by more compact and competitively-priced instruments. This has driven the demand for well-trained specialists in these various fields, however academic teaching and education has struggled to keep up with this demand for trained Raman technologists.

Raman spectroscopy in teaching laboratories

The theory of Raman spectroscopy is already an integral part of many university courses. However teaching the practical application of Raman technology is beset with many problems and obstacles.

REVA is a dedicated Hellma Solution that allows an easy and efficient integration of Raman Spectroscopy into university courses: Helping to train the new generation of specialists demanded by the industrial and scientific communities.

REVA- simple, reliable and ready-to-use

This fully-integrated solution for learning RAMAN spectroscopy consists of:

- Benchtop-Instrument
- Monitor, keyboard and mouse
- System- and application software
- Pre-configured experiments with all relevant course-ware prepared in cooperation with Raman experienced professors

The instrument is equipped with the patented Touch Raman™ Technology that eliminates the influence of the user on the measurement ensuring reliable results. REVA offers the ideal solution for the simple, safe and formalized acquisition of practical experience in Raman spectroscopy.
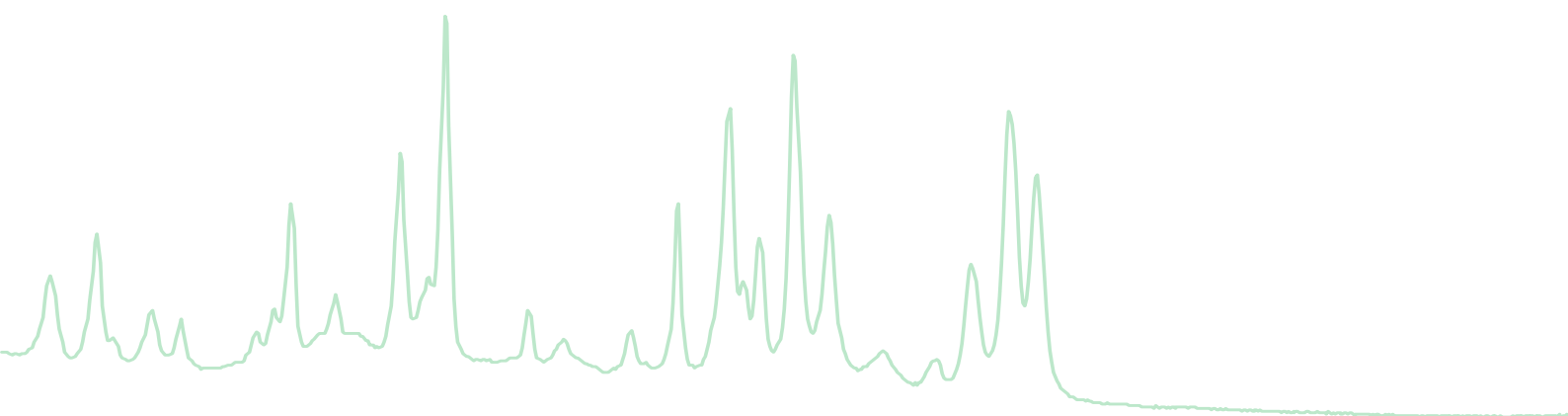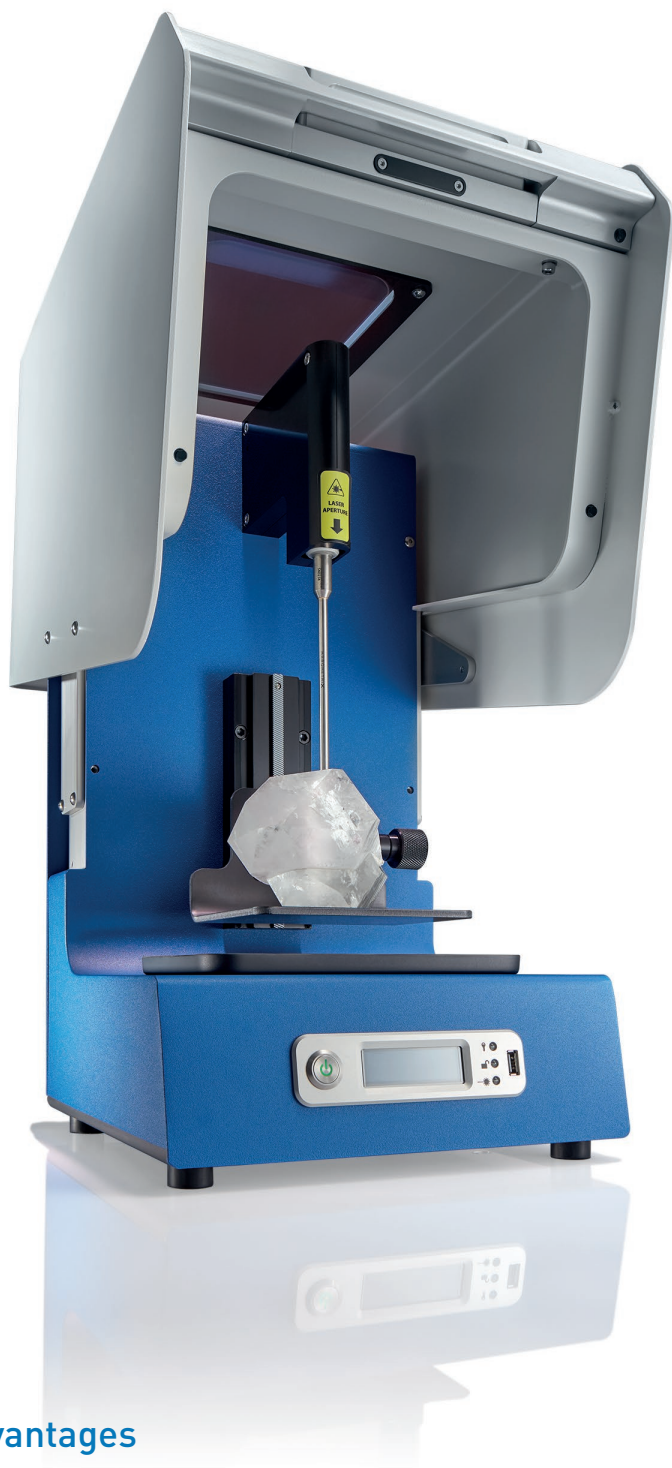
Laboratory Experiments

- Alcohol mixtures
- Beer identification
- Ethanol Agar Diffusion
- Exploration of functional groups
- $M(CO)_6$ and group theory
- $M(Co(CO)_4)_2$ synthesis
- Gemstone identification

Advantages

- Multi-level laser security
- No additional laser-security required
- Low space requirements (approx. A4/letter sheet format)
- Integrated PC with USB- and display port
- Simple, intuitive software
- Robust measurement probe
- Suitable for liquid, soft and solid products
- "Ready-to-use", includes pre-configured experiments

Optical Measurement

The optical measurement is made safely within the instrument using an immersion/contact probe. The special construction of the probe with sapphire windows and stainless steel housing, enables the measurement of:

- Liquids
- Solids
- Pastes
- Powders
- Heterogenic mixtures

By means of the fixed and integrated probe the application becomes simple and safe. Errors are almost impossible. The simple, intuitive operation means that even untrained operators can generate and interpret valuable and accurate data.
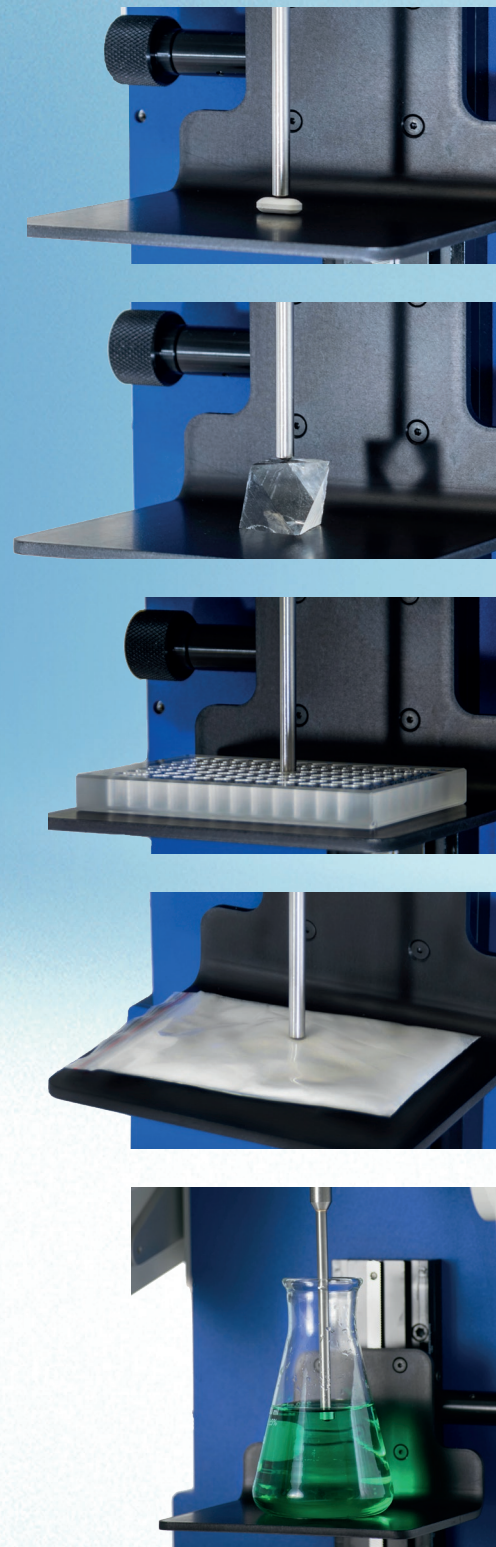
MORE INFORMATION
Learn everything you need about REVA on:

> **www.LearnRaman.com**

Fields of Application

- Chemistry
- Physics
- Pharmaceutical
- Life Science
- Material Science
- Nano Science
- Forensics
- Geology
- Food Research
- Raw material control
- Environmental

	Specifications	
Peformance	Excitation Wavelength	785 nm
	Excitation Power	300 mW
	Spectral Range	300 - 3100 cm^{-1}
	Resolution	8 cm^{-1} (785 nm)
Physical	Sample Interface	ø 6,3 mm TouchRaman™ Contact/Immersion Probe
	Max. Immersion Depth	150 mm
	Sample Handling	Integrated z-axis sample stage
	Operating Temp.	5º C - 35º C
	Dimensions	closed 564 mm (H) x 304 mm (B) x 299 mm (T) opened 670 mm (H) x 304 mm (B) x 485 mm (T)
Safety Features	Laser Certification	Class 1 device (acc. FDA,FCC, CE)
	Laser Shielding	785nm and near-IR absorbing shield with closing mechanism
	Tiered Interlocks	Keyed Laser Interlock Switch Safety Shield Sensor Interlock Software Controlled Laser Trigger
Electronic Features	Controller	Integrated PC
	Operating System	Windows 10
	Ports	1 x Display Port 1.1 3 x USB
	Input Voltage	90 - 264 V AC, 50-60 Hz
	Operating Voltage	12 V DC, 2 A
Accessories	Monitor	22" Flatpanel Monitor
	HID	Wireless Keyboard & Mouse Combo
	Software	Data Acquisition Software (pre-installed)
	Courseware	7 pre-configured laboratory experiments