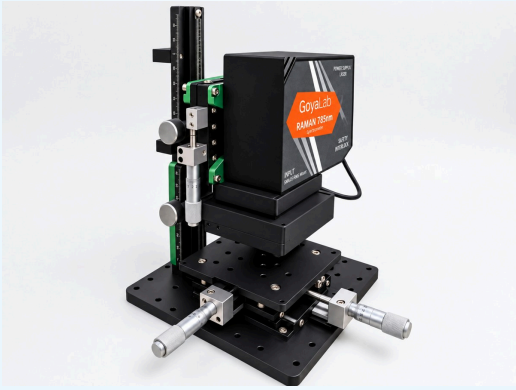
COMPACT BENCHTOP RAMAN

Benchtop Raman 785 nm

Compact modular Raman micro-spectrometer · fluorescence-reduced analysis

The GoyaLab Benchtop Raman 785 brings molecular analysis to the lab bench in a 1 kg footprint. Its 785 nm excitation strongly reduces sample fluorescence for organic, pharmaceutical and polymer analysis. Mounted on a 3D-Stand with micrometric X-Y stage and millimetric and micrometric Z focusing, it combines interchangeable microscope objectives and Class 1 vial holders for safe, reproducible measurements.



785 nm	150 – 3200	10 cm^{-1}	10–60X	Class 1
stabilised	Raman shift · cm^{-1}	Resolution (FWHM)	MPLAN objectives	On 3D-Stand / vial holder

Key features

- 785 nm stabilised laser, 100 mW single-mode or 300 mW multimode
- Laser power adjustable 10–100 % in 1 % steps
- Interchangeable MPLAN objectives (10X, 40X, 60X)
- 3D stand: micrometric X-Y, mm and µm Z adjustment
- Beam-splitter slider with optional colour targeting camera
- Optional water-cooled scientific sCMOS sensor
- Hardware interlock, Class 1 on stand or vial holder
- SpectroLab + Expert & Capture chemometrics

Sampling options

3D-Stand base
Micrometric X-Y stage with millimetric and micrometric Z focusing for solids and micro-samples.

Vial holder
Ø 10 mm borosilicate vials, Class 1 enclosure for liquids and powders.

Fibre version
Remote Raman probe for bulky samples and in-situ measurements.

Typical applications

Geology & gemmology · Pharmaceutical analysis · Carbon materials & graphene · Polymers · Chemistry teaching · Research labs

SPECTROMETER & LASER	
Laser	785 nm stabilised, 100 mW single-mode or 300 mW multimode
Raman shift range	150 – 3200 cm^{-1}
Resolution (FWHM)	10 cm^{-1} (25 µm slit, 15 µm option)
Sensor	Sony IMX676 colour 2D CMOS
Raman cut-off filter	150 cm^{-1} (20 cm^{-1} option)
Numerical aperture	0.2
Optional sensor	Scientific water-cooled sCMOS
Objective	MPLAN 10X (40X and 60X interchangeable)
Exposure time	1 ms – 30 s
Signal-to-noise ratio	1000:1

SAMPLING	
3D-Stand	Micrometric X-Y, millimetric & micrometric Z
Vial holder	Ø 10 mm borosilicate vials
Targeting	Beam-splitter slider, optional colour camera

SAFETY & INTERFACES	
Laser class	Class 1 on 3D-Stand or vial holder · Class 3B otherwise
Connectivity	USB high-speed · hardware interlock loop
Power supply	5 V · 500 mA
Operating system	Windows 11
Software	SpectroLab · SpectroLink (Python)
Data formats	.txt · .csv · .spc

CALIBRATION	
Wavelength	Automatic recalibration on supplied sulphur sample

MECHANICAL	
Dimensions	188 × 115 × 55 mm
Weight	1 kg

Benchtop Raman range

Version	Laser	Power	Raman shift	Resolution (FWHM)	Sensor
Benchtop Raman 532	532 nm single-mode	80 mW	150 – 4000 cm^{-1}	8 cm^{-1}	See dedicated datasheet
Benchtop Raman 785	785 nm stabilised	100 mW SM or 300 mW MM	150 – 3200 cm^{-1}	10 cm^{-1} (25 µm slit, 15 µm option)	Colour IMX676

Ordering information

AR00186 Benchtop Raman 785 nm – 3D-Stand included

AR00161 Laser safety glasses OD6 – 785 nm

Part numbers for information – please confirm with GoyaLab when ordering.

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