

Raman Microscopy Basic Level

Reference

RAM1 1 650€ per attendee

Duration

3 days

Dates

11-13 May, 21-23 September and
16-18 November 2022.

Schedule

From 9 am to 5.30 pm

Registration deadline

11 April, 21 August and
16 October 2022

Location

14 Boulevard Thomas Gobert,
91120 Palaiseau - France

Prerequisites

Knowledge of the technique and
equipment.

Who should attend

Users of HORIBA Scientific Raman
spectrometers.

Certification

A diploma is delivered at the end
of the course.

Learning method

Theoretical presentation and
instruments practice.

Course language

English

Objectives

- Acquire theoretical and practical knowledge on Raman spectrometers.
- Learn how to use the software.
- Learn methodology for method development and major analytical parameters.
- How to set up an analytical strategy with an unknown sample.
- How to interpret results.
- Learn how to follow the performances of the Raman spectrometer over the time.



PROGRAM

Day 1

- **The theory of the Raman principle.**
- **Raman Instrumentation.**
- **Practical session – System and software presentation, Acquisition Parameters:**
 - LabSpec 6 presentation and environment: user accounts, file handling, display of data, basic functions.
 - Set up of acquisition parameters and single spectra measurement.
 - Templates & Reports.

Day 2

- **Analysis of Raman spectra.**
- **Practical session: Raman spectrum measurement and Database Search**
 - Optimization of the parameters: how to chose the laser, the grating, the confocal hole, the laser power.
 - How to use the polarization options.
 - Library Search using Know It All software.
 - How to create databases.
- **Raman Imaging.**
 - How to make a Raman image (1D, 2D and 3D).
 - Data evaluation: cursors, CLS fitting, peak fitting.
 - Image rendering, 3D datasets.
 - Fast mapping using SWIFT XS.
 - DuoScan.
 - Ultra Low Frequency.

Day 3

- **Data processing.**
 - Processing on single spectra and datasets.
 - Baseline correction.
 - Smoothing.
 - Normalization.
 - Spectra subtraction, averaging.
 - Data reduction.
 - Methods.
 - Practical exercises.
- **Customer samples: Bring your own samples!**