

Particle Characterization Analyzer (PCA): Laser Diffraction

Reference

PCA1

Price

605€ per attendee

Duration

1 day

Dates

4 March 2024.

Schedule

From 9 am to 5.30 pm

Registration deadline

4 February 2024.

Location

14 Boulevard Thomas Gobert,
91120 Palaiseau - France

Prerequisites

Dedicated to HORIBA customers only and knowledge of the technique and equipment.

Who should attend

Users of laser diffraction analyzers
LA 300, LA350, LA950, LA960

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 the particle size analyzer
- Learn how to optimize operating conditions for any sample



PROGRAM

Day 1

Laser Diffraction Theory:

- Description of optical configuration and hardware
- Fraunhofer and Mie theory
- Refractive Index (RI) definition and optimization, mathematical data treatment
- Results and interpretation (distribution base (volume, number, surface), description of typical statistical parameters (D10, D50, D90, Mode, std, D43....))
- Presentation of the unit with its different parts and accessories demonstrating associated applications.

Software:

- Installation
- Software description for quick handling
- How to create method and check reference materials
- How to create a standard method
- Method set up on customer samples
- Importance of sample preparation (sampling, sample pre-dispersion)

Choice of Analytical Conditions and Optimization:

- Pump speed/stirrer speed (wet mode), Pressure / feeder vibration (dry mode).
- Acquisition time.
- Concentration.
- Ultrasonics: internal/external use.
- Refractive index optimization.
- Results interpretation (fit optimization, right size parameters selected regarding sample distribution, etc.).

Data exportation and setup

Specific software functions

Hands-on with Common Samples such as:

- Colored samples.
- Dense materials.
- Polydisperse & multimodal samples.
- Granulated formulations / friable samples.
- Emulsions.

Maintenance of First Level