

Training session

Multivariate Data Analysis

Discover the basis of Chemometrics methods

Objectives

This training session on multivariate data analysis is intended for people wishing to:

- Learn the basic methods of data analysis
- Become autonomous in data processing
- Assimilate the key steps of data analysis methodology

During the training, the method principles are introduced by a geometric approach. Emphasis is placed on the practical use of the methods and the interpretation of the results.

Application exercises are proposed for each method. Training can be held on various chemometrics software: Unscrambler® (Camo Analytics), SIMCA® (Umetrics Sartorius), PLS_Toolbox® (Eigenvector Research Inc.) or software under Matlab® environment (MathWorks).

Information



No prerequisites



2 days



R&D, quality control, product development, process optimization, ...



In-house sessions



All types of data except spectroscopic



Researchers, scientists and engineers



Agriculture / food, Petrochemical, Pharmaceutical, Biotechnology, Chemistry, Environment...

Program

Day 1: Exploratory analysis

- Introduction - Chemometrics
- Principal Component Analysis (PCA)
 - ✓ Theoretical principle
 - ✓ Interpretation
 - ✓ Detection of outliers
 - ✓ Application on data set and software



Day 2: Quantitative predictive modeling

- Linear multivariate regression models (MLR, PCR, PLS)
- Theoretical principle of multivariate regressions (MLR, PCR, PLS...)
- Model validation methods
 - ✓ Detection of outliers
 - ✓ Optimization
 - ✓ Application on data set and software



In-house sessions

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