ondalys

Training session

Data analysis for PAT

Learn about Chemometrics methods applied to Process Analytical Technology (PAT)

Objectives

This training session in multivariate data analysis, applied to PAT (Process Analytical Technology), is intended for people wishing to:

- Learn the basics of multivariate data analysis, also called Chemometrics, as part of the PAT initiative
- Set up chemometrics tools for PAT processes
- Know the performances and limits of the sensors used for rapid control of products and processes

During the training, the method principles are introduced by a geometric approach. Emphasis is placed on the practical use of the method and the interpretation of the results.
Application exercises are proposed for each method. The training can be held on different chemometrics software: Unscrambler® (Camo Analytics), SIMCA® (Umetrics Sartorius), PLS_Toolbox® (Eigenvector Research Inc.) …

Informations

- No prerequisites
- 3 days
- R&D, quality control, product development, process optimization, …
- In-house sessions
- Any type of data
- Researchers, scientists and engineers
- Pharmaceutical industry and biotechnology

Program

Day 1:

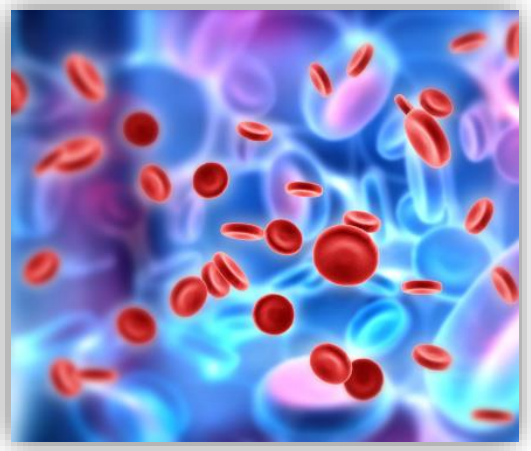
PAT - Process Analytical Technology

- Principles
- Examples of applications
- Sensors

Exploratory analysis

- Theoretical principle of PCA
- Interpretation
- Detection of outliers
  - ✓ *Application on data set and software*

Day 2: Quantification



- Theoretical principle of multivariate regression (PLS)
- Model validation methods
- Detection of outliers
- Optimization
- Prediction
  - ✓ *Application on data set and software*

Day 3: Identification

- Principle of identification
- PLS-DA (PLS - Discriminant Analysis)
- SIMCA (Soft Independent Modeling of Class Analogies)
  - ✓ *Application on data set and software*

In-house sessions

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