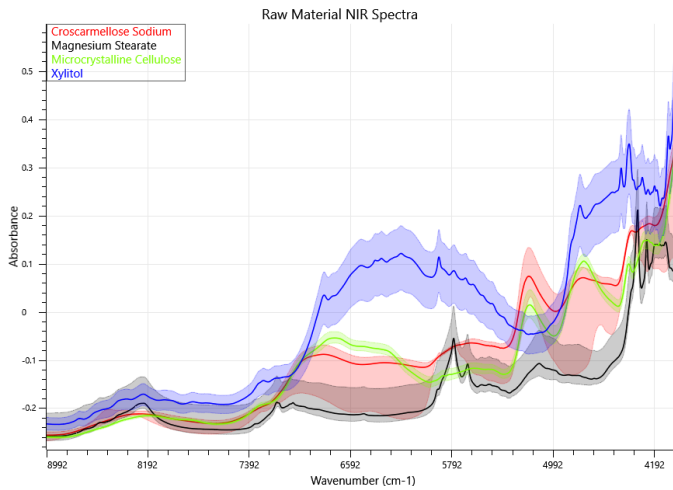


By

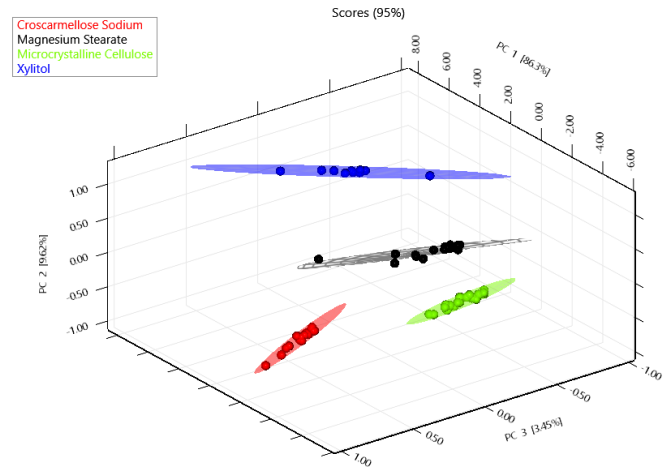
KAX Group

Multivariate Analysis with Direction and Purpose

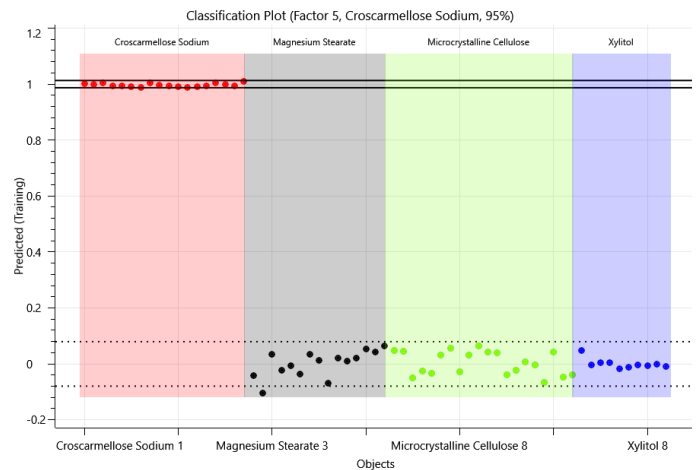
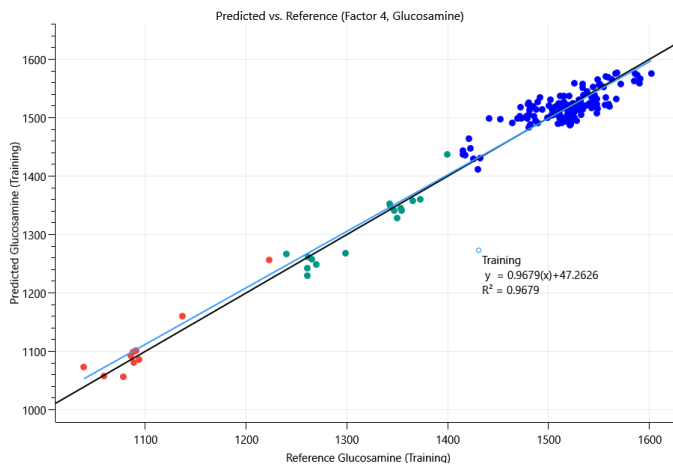
Visualise Data



Exploratory Analysis

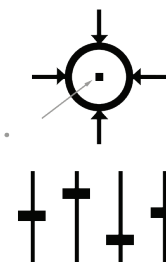
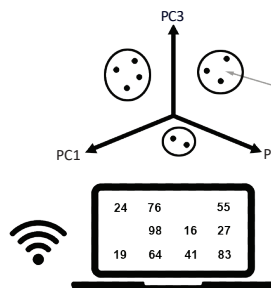
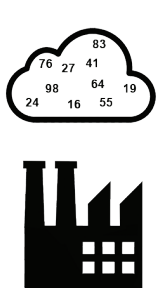


Visualise, Analyse, Interpret, Validate, Improve



Multivariate Regression

Classification



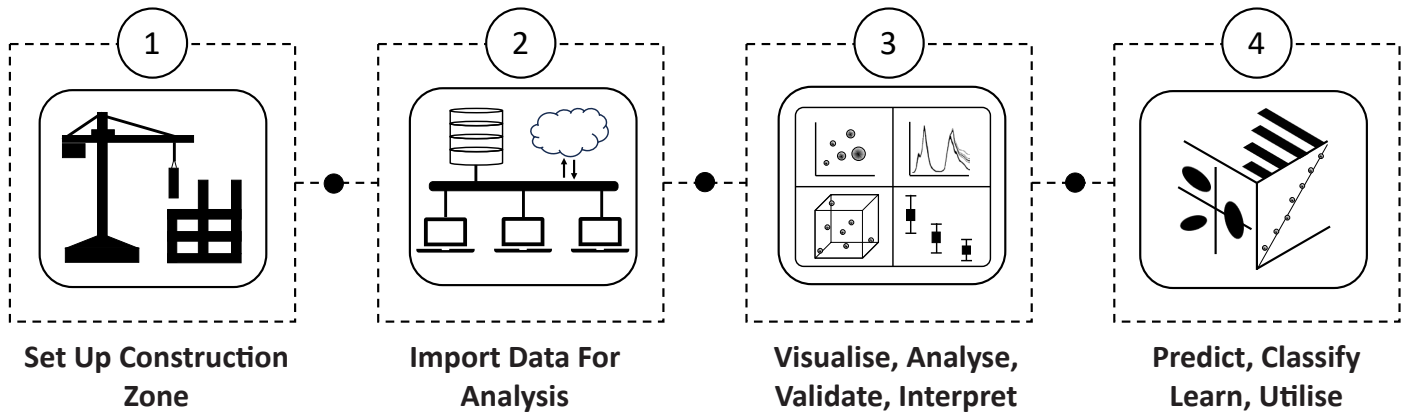
Your Data

Our Software







Your Success

What is VEKTOR DIREKTOR?

Simple, yet powerful Data Importation, Visualisation and Multivariate Analysis Software with a focus on Implementation









What Can VEKTOR DIREKTOR Do?

 ASCII	 Excel
 JCAMP-DX	 GRAMS
 NetCDF	 OPUS

Data Import

Data can be imported from a number of proprietary, standard and other formats using simple drag'n'drop from a palette of import options.

Define what you want to import, assign class variables and visualise the data as you import it to ensure the quality of the data before performing multivariate analyses.







 Bubble	 Heat map
 Correlogram	 Histogram
 Line	 3D Scatter

Visualisation

There are an extensive range of plotting tools, techniques and visualisation options available in VEKTOR DIREKTOR.

Generate plots and display them over multiple monitors for better interpretation and decision making. Group plots using Class Variables for enhanced interpretability and data presentation.

From importation of data through to prediction and classification, VEKTOR DIREKTOR provides an intuitive workflow that allows to you fully interact with your data so that you can get the most of of your valuable assets.

 Scaling	 Normalisation
 Savitzky-Golay	 SNV
 Weighting	 Smoothing

Preprocessing

Preparing data for multivariate analysis is a key step and requires a versatile toolkit to perform both simple and complex preprocessing.

You can define and save templates that allow you to string various preprocessing methods together allowing you to apply the template to new data or to future data

 ANOVA	 PCA
 MLR	 PLSR
 SIMCA-Library	 SVMC

Analysis

VEKTOR DIREKTOR only has what you use 95% of the time in your data analysis projects.

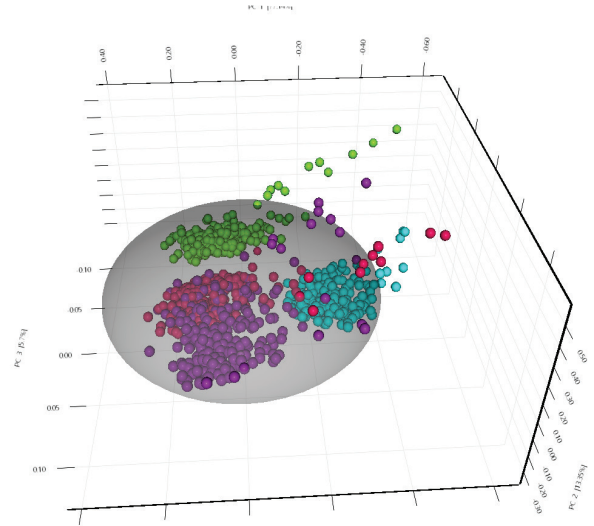
Featuring a powerful array of univariate and multivariate methods, VEKTOR DIREKTOR allows you to easily generate models and display the results in the way you want to visualise them with complete interactivity

Exploratory Data Analysis

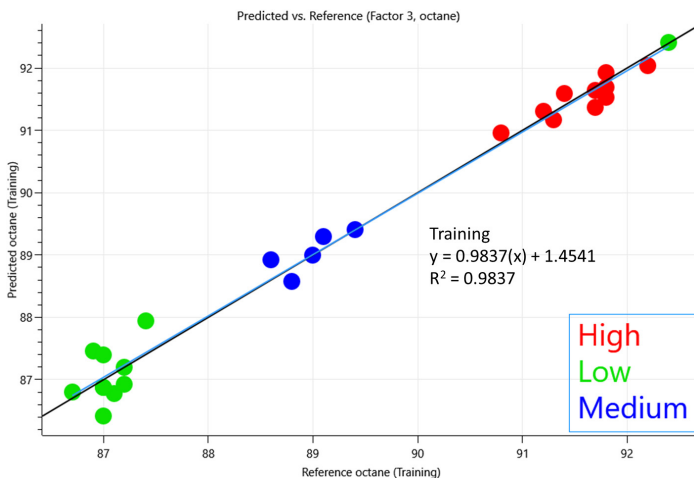
Multivariate Data Analysis (MVDA) provides highly visual data outputs in the forms of sample maps that allow you to understand the groupings in your data.

Methods like Principal Component Analysis (PCA) are used for,

- Finding better processing conditions in Chemical Processing.
- Optimising a product formulation in Food & Beverage industries.
- Validating processes in the Pharmaceutical Industry.
- Determining the number groups of samples are present when trying to classify new objects in academic.



Multivariate Regression and Classification



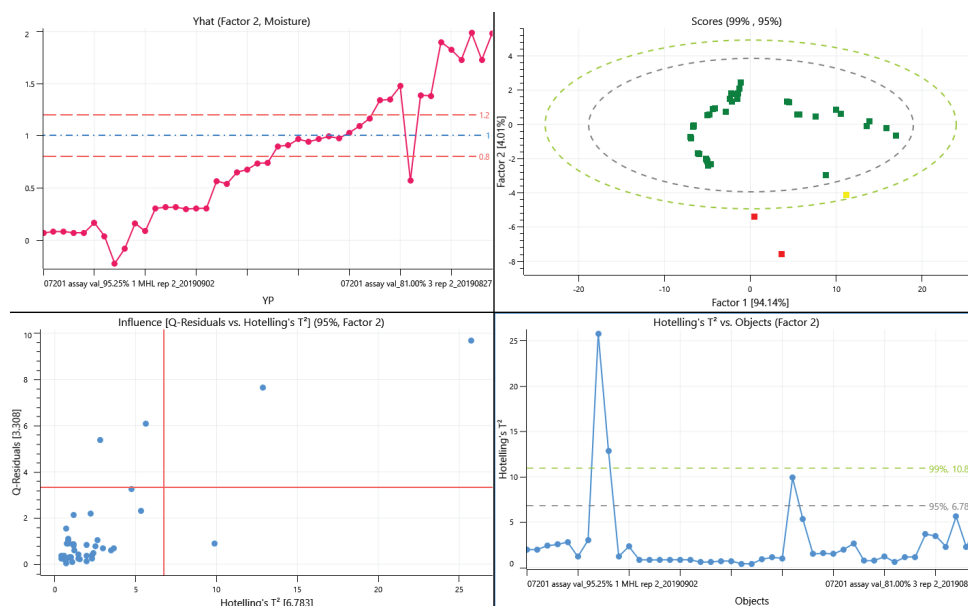
Multivariate Regression and Classification models allow you to make fast and reliable quality decisions based on quantitative results in seconds rather than hours.

Use this information for,

- Predicting API concentration during manufacturing using inline spectroscopic sensors.
- Predicting protein and moisture content in agricultural or feed samples.
- Classifying materials and products.

Predicted results can be used to control other processes in your operations.

Model Utilisation



Apply Regression, Projection and Classification Models to new data using VEKTOR PREDIKTOR.

Results are displayed in various ways depending on the model type used. All plots are interactive and results can be retrieved into spreadsheet format for reporting or further analysis using the statistical tools in VEKTOR DIREKTOR.



VEKTOR DIREKTOR

Multivariate Analysis With Direction and Purpose

System Requirements and Features

Supported Operating Systems	Windows 10 and 11 (32- and 64-bit).
Memory (RAM)	8GB minimum.
Processor Specification	Intel i7 minimum (preferred).
Hard Disk Space	1GB minimum.
Graphics Card	DirectX 9 or later.
Data Imports	<ul style="list-style-type: none"> • Spreadsheet and Text (.xlsx, .txt, .csv) • Universal Formats (GRAMS (.spc), JCAMP (.jdx), NetCDF (.cdf)). • Instrument Proprietary (MicroNIR Pro (.sam), OPUS (.01), Brimrose (.bff3), JEOL (.jdf)). • Instrument Drivers: MicroNIR and HAMAMATSU (on request). • Custom Imports (on request).
Plots	<ul style="list-style-type: none"> • Line. • Scatter (2D and 3D). • Bubble. • Correlogram. • Histograms. • Heatmaps and Surfaces. • Column.
Preprocessing Methods	<ul style="list-style-type: none"> • Smoothing. • Baseline. • Weighting and Scaling. • Normalisation. • Scatter Correction (MSC, EMSC and SNV). • Derivatives.
Analysis Methods	<ul style="list-style-type: none"> • Univariate Methods (ANOVA, Normality, F- and t-Tests). • Principal Component Analysis (PCA). • Multiple Linear Regression (MLR). • Partial Least Squares Regression (PLSR). • Soft Independent Modelling of Class Analogy (SIMCA). • Partial Least Squares Discriminant Analysis (PLS-DA). • Support Vector Machine Regression and Classification (SVMR, SVMC). • Extreme Gradient Boosting Regression and Classification (XGBoostR, XGBoostC).



KAX Group

Multivariate Analysis with Direction and Purpose

www.kax.group

info@kaxgrp.com