



# Enabling on-line classifications



**Unscrambler** X  
Classification  
Engine

# Process Control | Process Monitoring | Quality Control



## Unscrambler X Classification Engine

### Introducing the Unscrambler X Classification Engine!

Now you can benefit from the enhanced features, ease of use and powerful analytics in the latest version of our market-leading multivariate analysis software, The Unscrambler® X.

The Unscrambler X Classification Engine lets you run classifications directly from your analytical instrument. It can be integrated directly into a wide range of instruments and data systems, allowing you to classify samples in real-time with models generated off-line in The Unscrambler® X. Get more value from your instrument and process data with the Unscrambler X Classification Engine.

### Flexibility of result operations



Ensure reliable results within pre-defined limits. Preview classification results within the client software. Results can be saved in tabulated form or as graphs.

### Reduce deployment & training costs



Models developed can be seamlessly transferred with no prior knowledge of The Unscrambler®. This leads to lower manufacturing costs and maximises ROI.

### Automate operations



Apply classification models automatically to data collected from process based instrument(s).

### Quality Control Level of result detail



Specify the level of detail of the results obtained. These can range from only the class members, to members, distances (scaled / non-scaled), variances, scores and leverages.

## How to implement the Unscrambler X Classification Engine?

The Unscrambler X Classification Engine can be integrated into a client software platform by writing API function calls into it. Whether the software is developed in C / C++, Visual Basic, Visual C# etc. functions are called in a DLL. New samples from the client software are fed into the Unscrambler X Classification Engine for reliable classification results.

## Integrating the Unscrambler X Classification Engine with a client software



Instrument client software

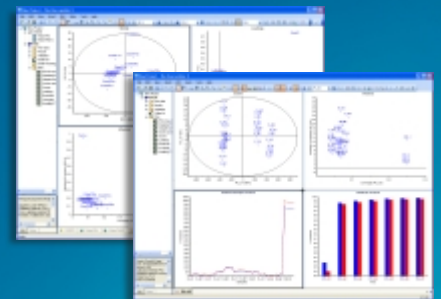


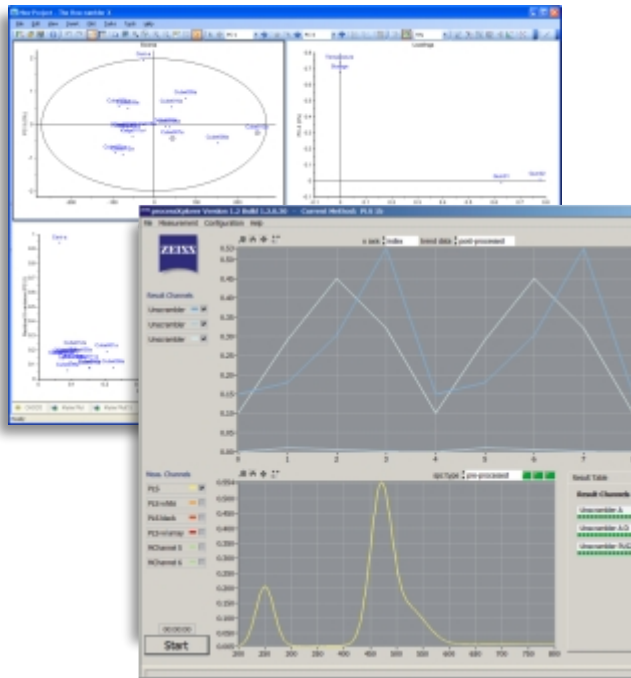
Sample data

Measurement data

Member Distances Scores  
Discrimination Power

The Unscrambler®  
model files (PCA, PLS, PCR, SVM)





## Features

- ▶ Perform real time classifications from data obtained from laboratory or process equipment
- ▶ DLL function calls(32-bit and 64-bit)
- ▶ Automatic data preprocessing, supports all pretreatments available in The Unscrambler® X
- ▶ Programmers reference manual available for in-house customization
- ▶ Supports SIMCA (PCA, PLS and PCR) LDA and SVM Classification models built in The Unscrambler X 10.1
- ▶ Runs on Windows 7, XP, Vista or Windows NT, 2000, 2003

If you're using The Unscrambler v9.8, you can convert models created to the Unscrambler X Classification Engine (v10.1) with our new file converter



**File converter**  
utility  
v9.8 to v10.1

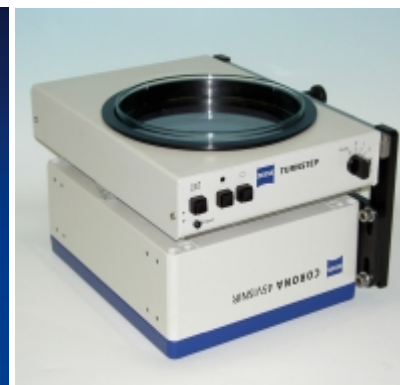
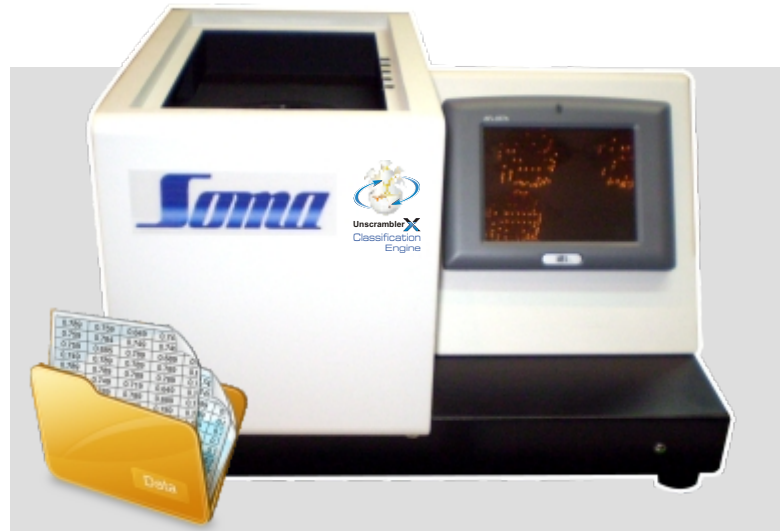


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## Application areas

The Unscrambler X Classification Engine is an easy to use software package enabling real time quality control measurements and Multivariate Statistical Process Control (MSPC). It has proven to be ideal for capturing data from various instruments and process outputs, moving away from univariate approaches to a multivariate view of quality. The Unscrambler X Classification Engine can be used for

- ▶ Providing quality measure used on the output of spectrometers or other process instruments
- ▶ Processing surveillance, on-line quality assurance, automatically accepting or rejecting items
- ▶ On-line recognition and sorting of objects based on a combination of characteristics. For e.g. weight, shape etc
- ▶ Identifying contaminated samples based on multiple measurements
- ▶ Classification of raw materials based on measurable characteristics
- ▶ Integration of spectral / chromatographic data of samples, which can be configured to classify samples into groups like Good / Bad, Pure / Adulterated etc



Unscrambler X  
Classification  
Engine

New

version 10.1

## Free Trial

Download a fully functional 30-day trial version of the Unscrambler X Classification Engine. To get started using the trial product visit [classifier.camo.com](http://classifier.camo.com)



[www.camo.com](http://www.camo.com)

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