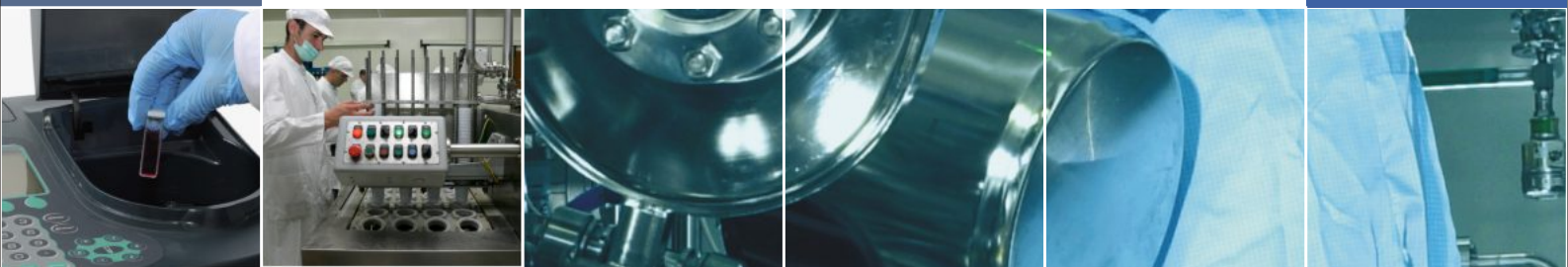




# Online Prediction & Classification



Build **Quality** into your product and processes



# Unscrambler

**ONLINE** 



# Unscrambler ONLINE

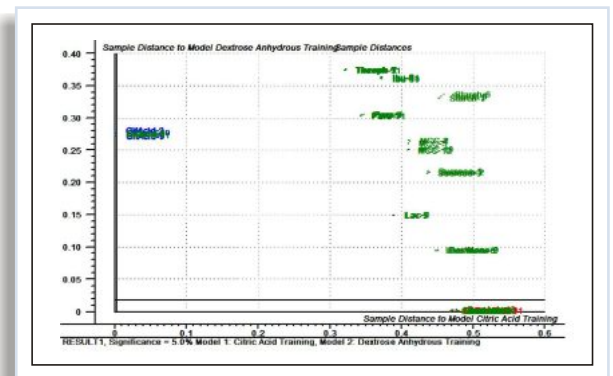
A revolutionary, plug 'n' play product designed for end-users across a wide range of industry sectors, the Unscrambler Online comes with unique features that enable effective on-line prediction and classifications for process monitoring and greater quality control. This can be achieved by integration into spectroscopic or other measurement / instrument systems.

The Unscrambler Online enables full utilisation of PLSR and PCR models for prediction, and of PLSR, PCR and PCA models for classification developed in The Unscrambler® software. Realise the full potential of Multivariate Statistical Process Control (MSPC) for better process understanding, improved quality control and reduced research & development efforts.

## Prediction and Classification

through polling

- Select/upload PLSR and PCR models developed in The Unscrambler® for prediction and PCA, PLSR or PCR models for classification purposes
- Runs simultaneous online predictions and classification on multiple Unscrambler models
- Provides prediction uncertainty, sample residual and leverage
- Define the optimal number of PC's / Factors
- Supports:
  - JCAMP-DX, GRAMS, Indico and BFF3 data file formats
  - The Unscrambler®'s merged model file format and The Unscrambler®'s micro model file format
  - All pretreatments available in The Unscrambler®, including the Extended Multiplicative Scatter Correction (EMSC)
- Store result outputs in Excel, XML, HTML or ASCII. Real-time update of results in Excel format



30 Day  
Trial

Try Now

[www.camo.com/unscrambler-online](http://www.camo.com/unscrambler-online)

incorporate  
QbD principles  
into your processes

Supports all pretreatments and combinations of pretreatments available in The Unscrambler®



Energy



Pharmaceuticals

### Predict product composition

Predict the amount of drug in a drug substance or the composition of food products

### Classify products / samples

Classify products / samples based on region or environmental conditions

# Key Features

## Easy Configuration

- Configure and create an operation method in a few easy steps (*no programming skills required*)

## File Polling

- Predict or classify samples online at regular / user defined intervals, using pre-developed Unscrambler models
- Utilise JCAMP-DX, GRAMS, Indico & BFF3 input data formats measured by spectroscopic instruments

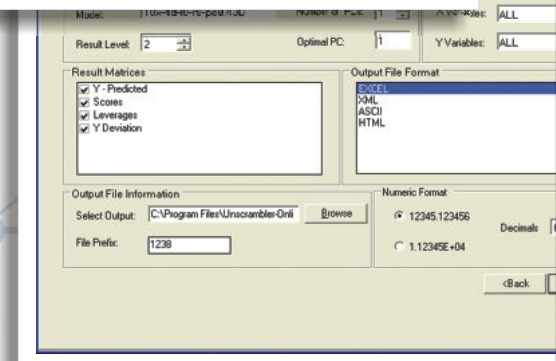
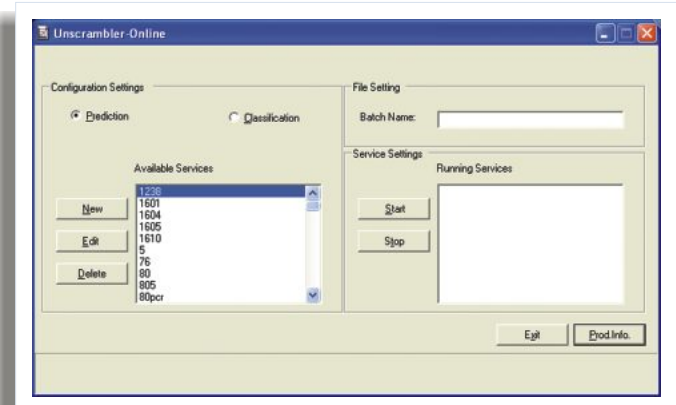
## Auto Pretreatments

- Supports auto pretreatments / transformations used in The Unscrambler®

*(Smoothing, Normalisations, Baseline Corrections, Derivatives, Multiplicative Scatter Corrections (MSC and EMSC), Standard Normal Variate (SNV) and Spectroscopic data conversions: absorbance to reflectance or transmittance and vice-versa, reflectance to Kubelka-Munk)*

## Multiple Model Selection

- Compare prediction results using models of different variable ranges, number of PC 's or data pretreatments
- Method configuration options to include different types of Unscrambler models for prediction / classification: PLS1, PLS2, PCR and PCA



## Result Display

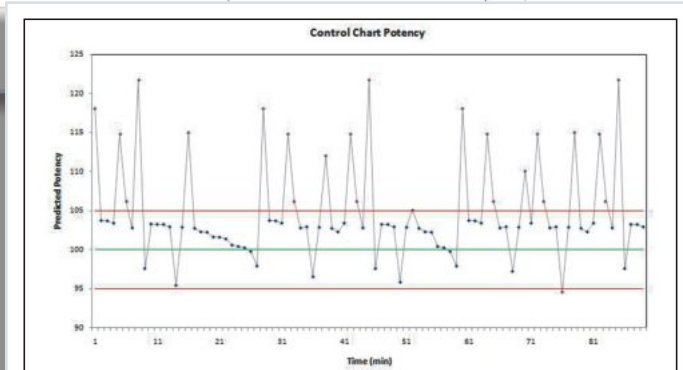
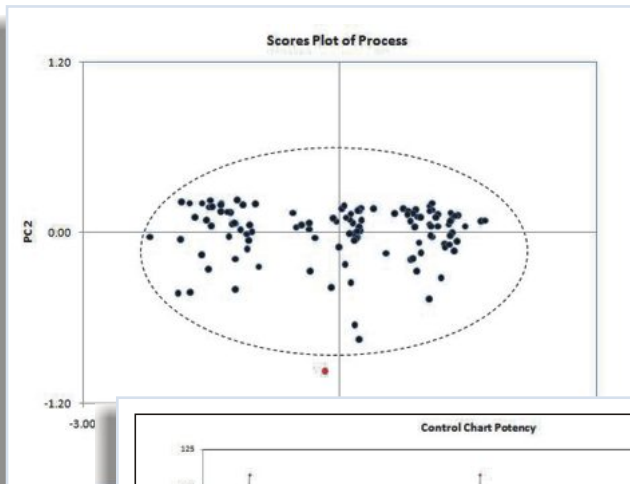
- Displays and updates results in Excel format
- Prediction uncertainty, sample residual and leverage provided available as part of prediction results
- Scores, sample residual and leverage available as part of classification results

## Security and Traceability

- Authenticates Username and Password
- Tracks operations and measurements as per the requirements of 21 CFR Part 11 compliance

“ Quality cannot be tested into a product, it must be built in or by design ”

*CGMP's for the 21st Century*



## Process monitoring

Monitor blending, drying, dissolution and other process parameters in a wide range of industrial applications

## Quality control

Identify raw input materials and constantly monitor output quality



Chemicals



Food & Beverages



## Build **Quality** into your product and processes

### Products

#### The Unscrambler®

Multivariate Analysis, Chemometrics & DoE

#### Unscrambler Online

Online Prediction & Classification

#### Unscrambler Optimizer

Product Formulation & Process Optimization

#### Quali-Sense

Qualify your sensory data

### Training

Multivariate Data Analysis - Level 1 (2 days)

Multivariate Analysis of Spectroscopic Data (2 days)

Design of Experiments (3 days)

Multivariate Analysis of Sensory Data (3 days)

*(Public Training & In-house customised training)*

### Customised IT Solutions

New Product Development

Product Integration

Data Migration & Quality

*(Offshore Development Center in Bangalore, India)*

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