

Increase your product profitability



Unscrambler Optimizer

- > Product formulation
- > Process optimization

Identify packaging attributes

Identify the right packaging attributes consistent with manufacturing needs & feasibility, at the initial stages of production process

Determine optimal product properties

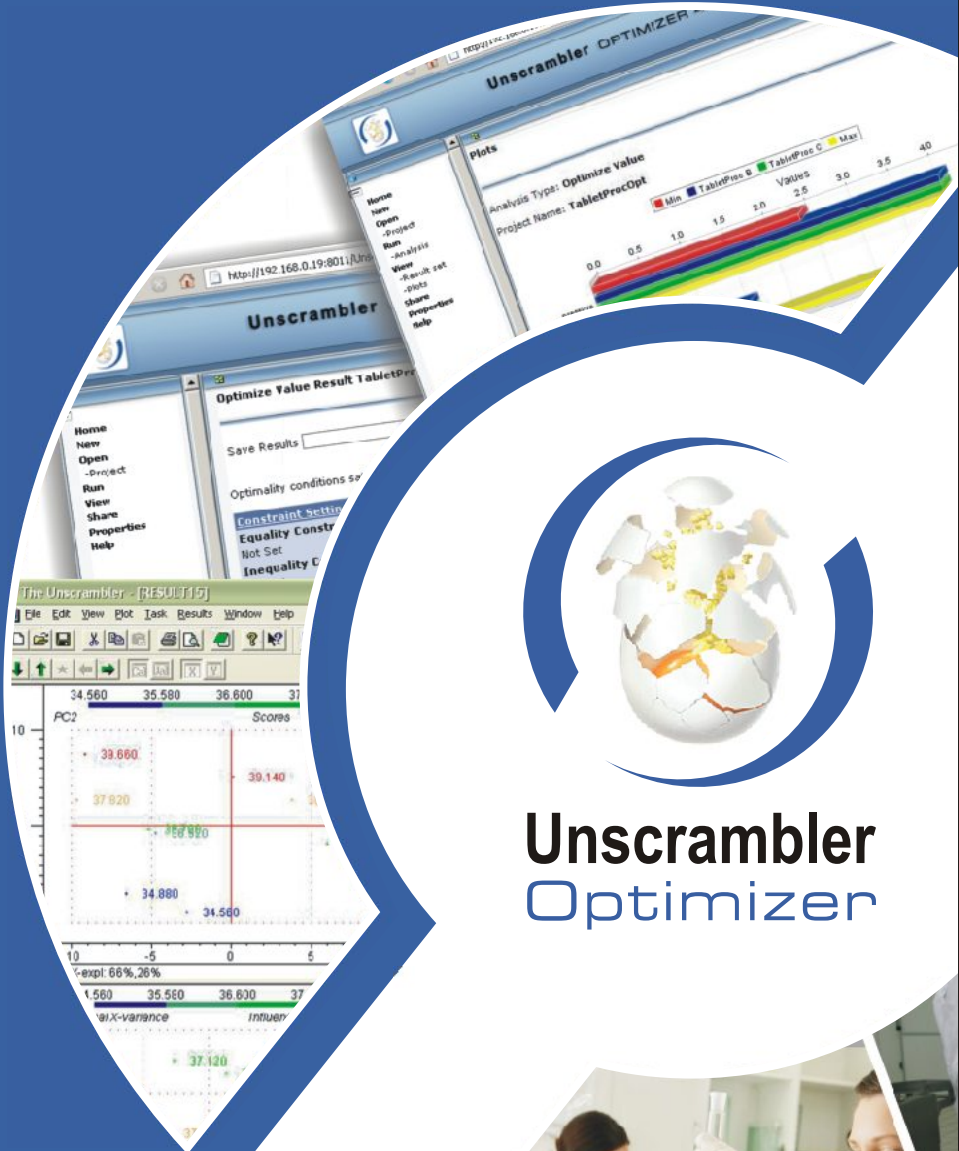
Understand complex research data & determine optimal product properties customised to consumer needs

Minimising physical experiments

Reduce costs by minimising the number of physical experiments and market research efforts

Reduce time-to-market

Reduce time-to-market and increase ROI by accurately determining product performance & benchmark your product with competitors



Unscrambler Optimizer



Companies today, continually strive to deliver customer focused formulations to create products, more closely aligned with market needs. Revealing optimized product formulations require, extensive R&D and data analysis. However, the time and effort involved in conducting multiple studies and experiments, make these scientific R&D studies, a detailed and expensive propositions. The Unscrambler Optimizer enables a company to leverage and strengthen their competitive advantages by taking advantage of the tools of experimental design.

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Research



Product

features

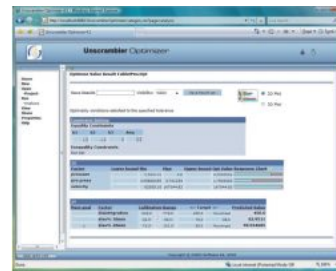
Multi-objective optimization

- Simultaneously optimize critical product attributes including
 - product formulations
 - manufacturing process parameters
- (routines with constraints on X variable ranges as well as X-values)*



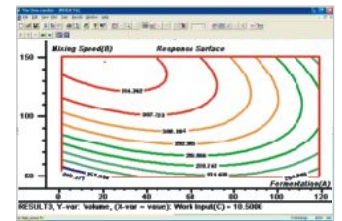
Equality & inequality constraints

- Set up Equality and Inequality constraints when analysing projects
 - Mixture Design application for formulation, parameter infeasible or parameter relationship constraints in process optimization
- Set optimization routines with targets on Y variables as well as Y tolerance settings



Usability tools

- Determine whether a set of experimental conditions can realise expected product quality
- Incorporate PLS models built with The Unscrambler®, reducing time and effort
- Plot optimization and prediction results
- Perform out-of-range searching
- Seamless import / export to The Unscrambler®
- Prediction and Reverse Prediction using The Unscrambler®



optimize your products & processes

The Unscrambler Optimizer is an easy-to-use, web-based tool designed and developed for the product formulation and process optimization needs of the chemical, pharmaceutical, food & beverages, energy, sensory and market research fields.

Using quality multivariate statistical analysis techniques, this easy-to-use software helps identify key parameters from scientific and market research studies. The user-friendly interface allows seamless import of The Unscrambler® models, to perform design optimization

on consumer preference data, panel data and instrument data. Product properties may be determined through the predictive modeling feature in The Unscrambler® and helps in comprehending optimized results using advanced plotting features. The multi-objective optimization feature enables benchmarking of products with those of competitors to detect and assess inherent strengths and weaknesses.

Application Areas



Pharmaceutical

- Optimize drug formulation to enhance efficacy & physical performance attributes
- Optimize product development life cycle by improving manufacturing process parameters



Chemical Manufacturing

- Optimize manufacturing process parameters such as temperature, feed rate & concentration to enhance yield, improve quality reduce production cycle time
- Improve quality of chemical formulations



Food and Beverage

- Optimize baking process parameters to improve product quality
- Optimize beverage mixture composition to produce preferred taste
- Analyse effect of product variations on customer liking to identify and develop successful products



Unscrambler Optimizer

free trial

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About CAMO

CAMO ASA is a pioneer in scientific software, workflow management and IT services company that is publicly listed in Norway OTC. Our Multivariate Data Analysis and Chemometrics engine, The Unscrambler[®], offers the most definitive analytical modeling, prediction and optimization solutions.

Headquartered in Oslo, Norway, CAMO's passion is the comprehension and simplification of complex data, resulting in efficient identification, cost, research and design, as well as faster analytical results. This allows our clients to provide an accelerated return on investment in research, development, manufacturing and business.

Professional Services

With over one hundred years of combined experience in Multivariate analysis, Chemometrics and PAT solutions for the Pharmaceutical, Chemical, Energy and Food & Beverages sectors, our array of solutions stem from one-on-one listening of our client needs to providing the right consulting to solve their problems. We provide comprehensive consulting services including workshops, seminars, training, webinars and on-site technical support.



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