

# THE UNSCRAMBLER®

### Powering The Adaptive Enterprise

# Statistical Software For Researchers

Design and Analysis is quickly becoming a crucial component of research, vital to creating, improving, and expanding product lines. Adaptive enterprises produce more products in less time, and at less cost. Their research is strategic and well executed. Results are generated efficiently and communicated effectively to get the product to market faster.

Visualizing complex data in an easy to understand format is a key way of speeding up product development better and making products. The right methods are a catalyst that promote teamwork and multiply product throughput.

Consider all of the data you collect and the process of analyzing that data, making conclusions, and moving on to the next phase of a project. Moving from research to analysis, and then to presentation and decision-making can be a lengthy and detailed process.

The Unscrambler® solves these challenges and allows for new levels of production. World-class statistical analysis with awardwinning point-and-click visual capability provide the tools needed to translate multivariate relationships into graphical displays.

The Unscrambler® can be installed directly on your desktop, or as a network application.

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It combines statistical analysis techniques and "multivariate mapping" for easier data interpretation. Users will access The **Unscrambler**® and effortlessly perform powerful statistical analyses while easily communicating results to colleagues.

### THE UNSCRAMBLER®

Empowers users with the analytical tools required to unscramble data and create innovative solutions. Experiments can be designed. analyzed. and interpreted with one statistical package.



### **Components:**

- Editor data management tool •
- Viewer graphical interface
- Statistical Analyses menu driven •
- Designer design of experiments •
- Desktop or network installation

### **Features:**

- **Exploratory Analysis** 
  - Principal Components Analysis
  - Descriptive Statistics
- Multivariate Regression Analysis
  - Partial Least Squares Regression
  - Principal Components Regression
  - Multiple Linear Regression
- Prediction and Validation
- Classification (SIMCA)
- **Experimental Design**

- Fractional and Factorial
- Placket-Burmann and Box Behnken
- o Central Composite
- Classical Mixture Designs
- D-optimal designs
- o ANOVA
- Response Surface Analysis



CAMO's capabilities cover the complete process of research, data collection, design and implementation, technology resources and statistical capabilities through our solutions and professional services divisions. Our turnkey execution is highly desirable for solution integration and outsourced industry research services.

### **BENEFITS**

### Cost Savings:

- Fewer experiments
- Fewer samples needed
- Find substitute ingredients

### **Revenue Enhancement:**

- Increased throughput
- Improved products
- Faster product optimization
- Identify hidden relationships

### **OtherBenefits:**

- Easy to interpret results
- Less time spent doing data analysis
- Compare products, brands, and samples

### **CASE STUDIES:**

A petroleum producer used chemometrics and could increase productivity by 30% in one oil refinery, earning \$14 million extra per year.

A dairy saved \$130000 by not investing in new cooling equipment – a conclusion they draw from smart experiments using The Unscrambler $\mathbb{R}$ .

A petroleum company saves \$1 million per year by chemometrics based measurements.

An agricultural researcher got the same results in 10 minutes with The Unscrambler® as he got by analyzing his data during 3 months with classical statistics.

A meat manufacturer saved \$150000 per year by reduced waste in a process they optimized by using The Unscrambler®.

A food producer's first chemometric project saved \$115000 per year.

A dispersant developer made 20 experiments and simulated 380 thus reducing his experimental efforts by 95%.

An oil manufacturer, after two years of using traditional methods with no success, solved a quality problem in two weeks with The Unscrambler®

## **Contact Information**

### CAMO

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