# Quality = Measurements = Data = a Nightmare?

# Not necessarily!

## Your practical problems

| Situation | Objectives |
|---|---|
| • **Does your data acquisition run automatically and on-line?** | ► **Extraction and visualization of the information contained in that flood of data** |
| • **Are your processes complex? Do they involve many parameters and quality attributes?** | ► **Identify hidden correlations**<br>► **Detect interactions** |
| • **Is a new measuring technique to be introduced?** | ► **Validation of this new method**<br>► **Method comparisons** |
| • **Does it happen that specifications are not satisfied?** | ► **Efficient identification and elimination of the causes of excessive quality variability** |

## Does that sound familiar to you?

Today productivity as well as quality must be simultaneously optimized. Time and money must be saved, yield maximized, and quality and customer satisfaction increased. Methods and concepts like *Six Sigma*, *Process Analytical Technology* and *Design Space*, which facilitate the achievement of these objectives, are therefore more and more deployed.

Concretely, products and production processes must be optimized and improved. **The tools of industrial statistics, which are an integral part of the methods above, become indispensable** and their appropriate use leads to a competitive advantage. Not only a reliable and complete **data analysis** plays a crucial role, but also the entire process of collecting the data, either using **sampling methods** or **designed experiments (DoE)** is essential.

The examples mentioned above can be solved with these techniques. They represent only a few of the various situations that our customers and ourselves were confronted with over the last few years. Some are classical problems of industrial statistics, others are not. But they all have taught us to better speak the language of the practitioners.

AICOS Technologies is your competent partner for these topics.

## Our strengths

- ***Scientific expertise in the areas of statistics, quality control and data analysis***
- ***Long experience over numerous projects for leading chemical and pharmaceutical companies as well as in the food and cosmetics industry***
- ***Up-to-date knowledge of the most important software tools for statistics and data analysis***

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# Our services

- Designing informative experiments with optimal sample size
- Choosing and implementing those statistical tools the most appropriate to your case
- Analyzing complex data sets either from production or from the laboratory
- Developing and integrating customized statistical applications, e.g. as part of a process data management system
- Training engineers and scientists in the use of statistical techniques as well as in the areas of *Six Sigma* and *Process Analytical Technology* (see our training program).

# Our competence

**Statistical Quality Control and Quality Assurance**

- Statistical Process Control (univariate and multivariate)
- Sampling and sampling plans
- Audit of quality control activities

**Process optimization**

- Design of Experiments (DoE), incl. Taguchi's method, for process improvement and validation
- Troubleshooting analysis
- Correlation analysis

**Process capability analysis**

- Quantification of process variability
- Setting of specifications

**Reliability of measurement processes**

- Reproducibility and repeatability studies
- Development and validation of robust measurements systems (e.g. HPLC methods).

# Training

We offer a broad range of applied statistics courses from 1-day to 5-day courses in English, German or French. The courses can also be delivered in-house with your data.

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# Interested? Fax this page to: +41 61 686 98 88 !

I would like to receive more information on:

❑ software solutions ❑ consulting ❑ training

in the area of:

❑ quality control ❑ process optimization ❑ Design of Experiments

Name _____ Phone _____

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