

## CASE STUDY

## Analyse-it® Cuts Project Time in Half at Swiss Lab

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Marco Balerna Ph.D., Clinical Chemistry Department, EOC



Ente Ospedaliero Cantonale

When a division of the Swiss laboratory EOC decided to change its analyzers, it was not as simple as moving equipment in and out.

The regional laboratory for Ticino, the southernmost Canton of Switzerland, provides clinical chemistry for five large hospitals and three smaller clinics. In 2008, the lab decided to transition to Beckman Coulter machines for clinical chemistry and immunological assays.

“In Switzerland, because of the accreditation procedures, we’re rather demanding regarding the quality of machines, so we needed to perform method comparison studies,” said Marco Balerna, Clinical Chemistry Department, EOC. “It’s months and months of work.”

That meant comparing performance for 110-115 parameters, comprising over 25,600 measurements with control materials and patients’ samples.

### Advanced Method Comparison

Approaching the project, Balerna looked beyond the complex statistical package the lab regularly uses, instead seeking an easier-to-use alternative specifically designed for method evaluation. He chose Analyse-it method evaluation software for its ease of use, compatibility with Microsoft Excel and competitive pricing.

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### Customer

Marco Balerna, Ph.D.  
Clinical Chemistry Department  
EOC (Ente Ospedaliero Cantonale)

### Challenge

When EOC switched clinical chemistry and immunology analyzers, it needed to compare performance across 110-115 parameters.

### The Analyse-it Advantage

Integration with Microsoft Excel takes a major step out of the analysis process.

Deming, Weighted Deming and Passing & Bablok regression, possible with Analyse-it, is critical to EOC’s method comparison.

Ease of use with Analyse-it reduced overall project time by a couple of months, effectively cutting it in half.

Analyse-it provides the reports and graphics needed for the customer to present to colleagues and at conferences.

He quickly found he uses nearly every method comparison procedure available in the software – Deming regression, Weighted Deming regression and Passing & Bablok regression. “Those procedures are absolutely mandatory for us,” Balerna said. “We also have many other possibilities in Analyse-it with parametric and non-parametric statistics, including 2-way ANOVA, correlation and linear regression.”

Analyse-it is one of the only programs enabling Weighted Deming regression – critical to proper comparison of methods with non-constant precision over the measurement range.

### Fast, Simple, Accurate

Analyse-it integrates directly with Excel, which takes a lengthy step out of the analysis process. With values already in Excel, Balerna analyzes the data rapidly in Analyse-it.

In the past, when he needed to fix an error in the original data, or if he wished to add new data, Balerna would have to re-do every analysis. Now, he enters just the corrected value in Analyse-it and “refreshes” the results, updating the reports to reflect the changes in his data. “Every time, the refresh button is a surprise and an enormous help. It’s a pleasure actually,” he said. “If I had to re-do everything, it would take a lot more time.”

After using a complex statistical program for many years, Balerna wanted to ensure that Analyse-it provided the level of accuracy the lab required.

“I was very attached to our classical statistics program, but Analyse-it is particularly well-performing,” Balerna said. “We compared the results of Analyse-it with the other program, and they compared perfectly.”

He also estimates that the simplicity of using Analyse-it helped him reduce the overall amount of time required for the project, cutting two months out of the method evaluation process. Ultimately, that reduced the project time by half.

### Preparing Presentations

With this specific project now complete, Balerna will present the findings to Beckman Coulter International at a conference in Geneva. Analyse-it simplifies creating the graphics he needs for the conference and reports for day-to-day work with colleagues.

The software’s formatted reports enable him to print the analysis results immediately, or copy and paste charts and statistics into other documents. He can control just about any aspect of the graphical presentation as desired, creating clear, concise plots. Charts are based on the most popular formats seen in published research, and so are immediately ready for inclusion in research.

### Looking Ahead

With the success of the comparison project, EOC has integrated Analyse-it into its daily method comparison activities. In particular, Balerna feels that Analyse-it will significantly ease evaluation for team members new to the field or lacking statistical backgrounds. The familiar Excel environment reduces the learning curve of the software.

“Analyse-it is so much easier for someone entering the field,” Balerna said. “Every time I use it, it goes so rapidly and precisely. That’s the real advantage.”

#### About Analyse-it<sup>®</sup>

Analyse-it is the most popular statistical analysis and charting software for Microsoft<sup>®</sup> Excel<sup>™</sup>. Formed in 1997, Analyse-it built its flagship product through work with two of the world’s largest pharmaceutical and diagnostic companies: Astra Zeneca and Johnson & Johnson (now Ortho-Clinical Diagnostics). More than 15,000 customers all over the world use Analyse-it, in organisations ranging from pharmaceutical and diagnostics, to educational, environmental, geological, medical & life sciences. Analyse-it is well respected in the scientific and research community, and is used and cited in thousands of peer-reviewed published papers.