



Datalyzer Qualis 4.0 Analytics

Software for Advanced Data Analysis



Datalyzer International

Datalyzer® International provides its customers with advice, tools and support to promote manufacturing excellence through continuous improvement. Datalyzer® is the only supplier globally offering an integrated web-based FMEA, MSA, SPC and APQP/PPAP solution.

Datalyzer Qualis Analytics

Flexible and Agile Usability of common Data Analysis Tools

Provides facility to easily select any section of the data, include/exclude data points with any combination of attributes, with instantaneous creation/refresh of control charts, histograms, Pareto's, scattergrams, multi-vari and F and T-test allowing the needed flexibility during analysis. This makes Qualis Analytics an excellent tool in your six sigma implementation or for promoting the use of SPC with suppliers.

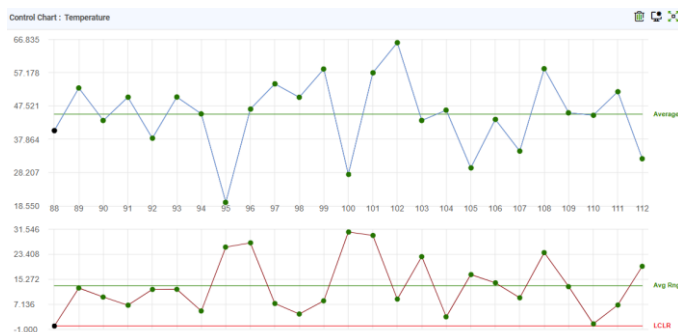
Quick Import

Data can be imported real-time from the Datalyzer SPC database, Microsoft Excel and other SQL Server databases with or without previous setup.

Control Chart Analysis

Control chart can be created and analysed. Qualis Analytics contains calculated control limits using any section of the data with multiple calculation rules;

- make analysis based on parameters added to the chart like operators, order numbers, article numbers etc.
- select attributes to appear in a chart;
- multiple control charts in one screen;
- time based analysis;
- review user notes from samples;
- exclude points from the calculations.



Capability Analysis

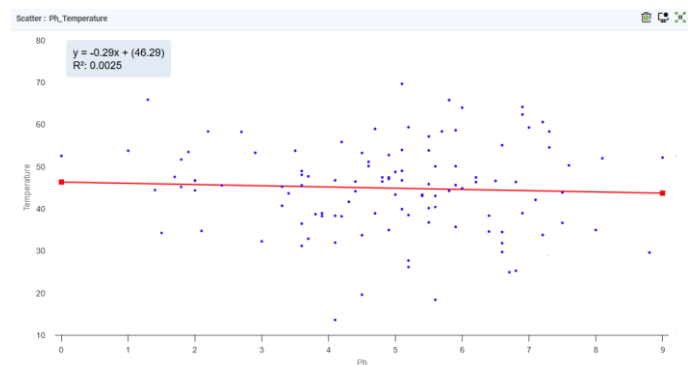
Qualis Analytics can create histograms against a given set of data and allow several following options to aid investigation, for example:

- Toggle between real standard deviation and estimated standard deviation

Correlation Analysis

Correlation can be made between variable data, attribute data and numeric optional parameters. A full correlation heatmap table can be created between multiple columns in the data set.

During analysis data points can be excluded in the Scattergram view.

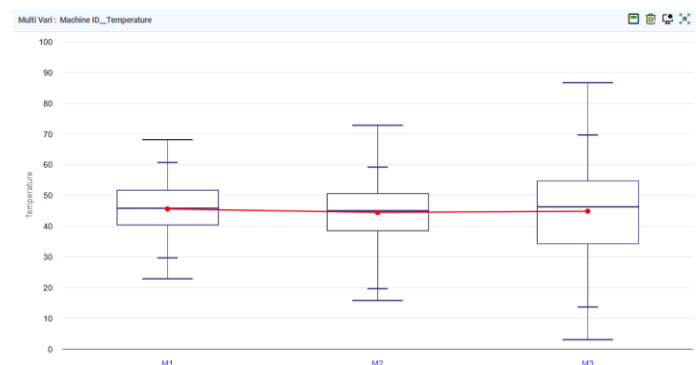


Pareto Analysis

Pareto graphs can be made from attribute data but also from logbook entries. Specific columns can be excluded from the analysis.

Multi Vari Analysis

Multi Vari analysis based on time and parameters (operators, suppliers and machines etc.) up to three factors, serving as a preliminary tool to get ideas for further investigation. Qualis Analytics provides a feature to pick the response data points to instantly conduct the F- & T-test in steps showing the normal curve, confidence interval and the data itself.



Frequency Analysis

Qualis Analytics allows instantaneous frequency analysis of events with grouped and ungrouped data against time and parameters with Pareto ordering and percentage.

Advanced Data Set Operations

In addition to the common tools, Qualis Analytics contains some advanced tools to analyze data. You can for example combine data from different data sources and join the data based on a common parameter (e.g. Serial number) or based on matching date and time values or time differences. Multiple data sources can be combined automatically.

Some examples:

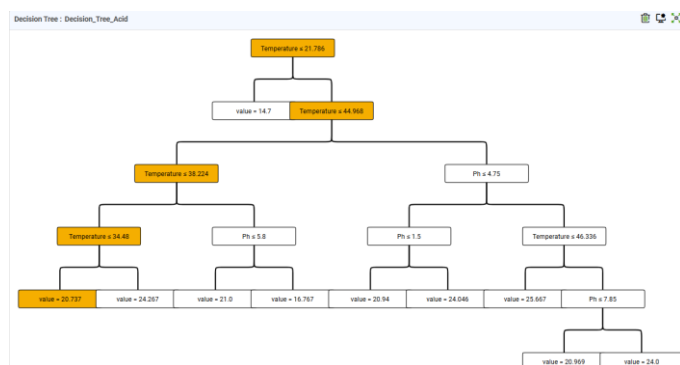
- Data captured in the SPC system can be easily correlated with supplier data found in Excel files and environmental data found in the database of the logging system.
- A major medical device company uses the tools to apply full tracking and tracing of an individual product through all process steps.

Integration with Datalyzer Qualis SPC

Qualis Analytics is seamlessly integrated with Datalyzer Qualis SPC, the SPC tool providing real time SPC analysis eliminating the need for export and data migration across tools.

Machine Learning

Machine learning Decision Tree Analysis (Random Forest) is implemented in Qualis Analytics. In many manufacturing processes interaction between quality inputs collectively impact outcomes of CTQs. With predictive outcome analysis using Decision Trees, we can make a model of these data streams including all interactions and show the predicted quality of the CTQs. For textual data, we have implemented Ngrams analysis. More Advanced tools will be added as per customer requests.



Hypothesis Testing

For hypothesis testing, we support several Inferential Statistics like Mean Tests, Median Tests, Variance Tests and Proportion Tests. The Mean Tests include the 1 sample t-test, 2 sample t-test and One way ANOVA tests. Median Tests include the Sign Test, Mann-Whitney Test and the Kruskal-Wallis Test. The Variance Tests include 1 sample variance-test, the F-test and the Bartlett Levene test. Proportion tests include the 1 sample proportion-test, the 2 sample proportion-test and the Chi square test.

For all tests it is possible to adjust the Confidence levels and define the Alternative Hypothesis.

Design of Experiments

Qualis Analytics provides Design of Experiments for Full-Factorial Models and Fractional-Factorial Models. Experiments can be created in workspaces of the users, and are stored in the database.

A 4 steps approach guides you through the Experiment Setup, Model Optimization, Model Analysis and Model Validation.

Experiment Setup

Setup Configuration Final Setup

No. of input factors: 2 Type of design: Full factorial Select

No. of centerpoints: 3 No. of blocks: 1

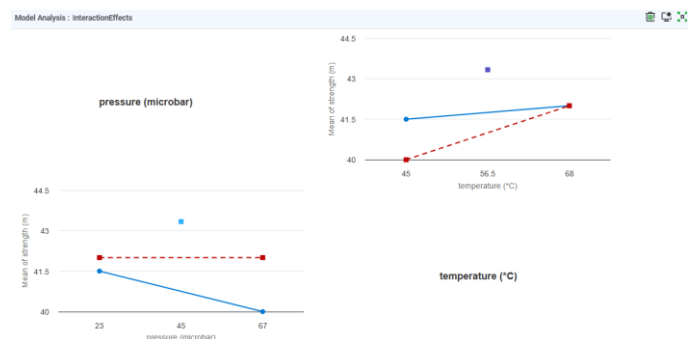
☒ Automatic centerpoint placement ☐ Manual centerpoint placement

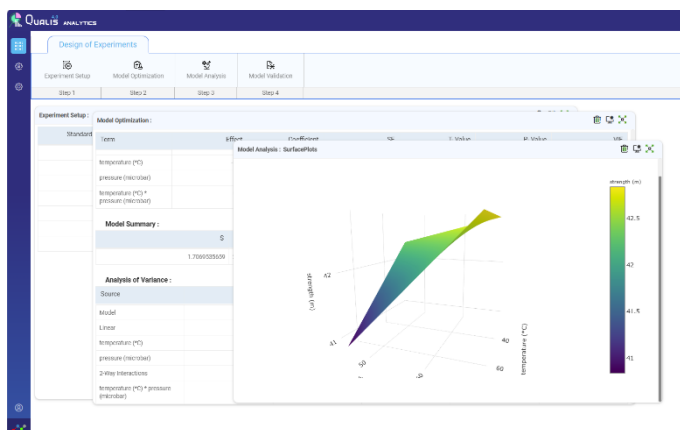
No. of replicates: 1

☒ Randomize runs ☐ Do not randomize runs

Apply Cancel

For the Model Analysis, several graphs are available like Factor Effect Analysis, Interaction Effect Analysis, Contour Plot and Surface Plot.





Qualis Analytics also supports Residual Analysis including the Independent test, Normality test and Equal Variances test.

A Model Validation feature allows to find the optimal (maximize, minimize, or target output value) input values.

About Datalyzer

Datalyzer International, Inc. was established in the late 1970's to develop quality software for industry. Since that time we have established a solid reputation for innovation and customer responsiveness. Datalyzer International has contributed many firsts to its industry.

Datalyzer International was one of the first companies to provide a commercial (real-time) SPC software package for industry in the early 1980's. Soon after, we developed the first commercial Gage Repeatability and Reproducibility software package.

Nowadays, Datalyzer International is the only company providing an integrated software suite for the full APQP process and documentation, including the core tools FMEA, Control Plan, MSA and SPC. We offer global implementation support and our software suite is fully web-based and compliant to all latest standards.

Our Mission

Datalyzer International, Inc. is in business to develop software for continuous improvement of quality and productivity. Our progress depends on successfully pursuing the following principles:

- Offer maximum value in personal service with each customer contact, whether it be sales, support, documentation, consultancy or customer training.
- Be alert for opportunities to improve and support customers for the long run.

Customer Support

Technical support for the Datalyzer® Software is available by phone, e-mail or by our automated support desk.

- USA: Monday through Friday, 8:30 to 5:30 ET
- Europe: Monday through Friday, 8:30 to 6:30 GMT -1
- Asia: Monday through Friday IST 8:30 to 6:30

Software purchases include no-charge updates for six months. Support agreements are renewable annually for a modest fee. Services include new versions upon request and support through telephone, e-mail and our Support Desk Portal.

Training seminars are available in our offices or on site. Contact your account manager for more information. Custom software modifications can be quoted individually.

Database Compatibility

Datalyzer® Qualis Analytics software versions are available for use with Microsoft SQL Server databases.

Operating System Compatibility

Datalyzer Qualis Analytics work with the following Microsoft Windows operating systems: Windows 8, 10 or higher. Datalyzer Qualis Analytics is network-compatible with Windows Server. Citrix® and Microsoft Terminal Services thin client/server configurations can also be used.

Associated Modules

- Datalyzer® Qualis SPC
- Datalyzer® Qualis MSA Gage Management
- Datalyzer® Certificate of Analysis
- Datalyzer® Qualis APQP/ PPAP
- Datalyzer® Mould Management
- Datalyzer® Qualis Failure Mode and Effect Analysis

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Datalyzer has office in the USA, Netherlands, Portugal, United Kingdom, India and Malaysia.

www.datalyzer.com

