



 **diaLIMS**
Software for your laboratory



diaLIMS is the groundbreaking IT solution for all laboratories with tailored solutions for the areas.

- Quality assurance
- Quality management
- Certified lab services
- Research and development
- Production support

diaLIMS provides dedicated modules for all the mentioned tasks. Its modular structure permits the customization of the system to the particular demands of a laboratory.

The work flow of your laboratory is perfectly supported by interaction of the modules.

diaLIMS can be applied in a wide range of industrial sectors, such as chemistry, food, drink, pharmaceuticals, contract laboratories, public authorities, genetics laboratories, medical labs, ...

Accredited and certified laboratories are thus able to comply with the demands of **DIN EN ISO 17025**, **GLP/ GMP** and **21 CFR part 11**. **diaLIMS** will also enable you to conform to the legal requirements of documentation with regard to quality assurance.

diaLIMS.QS

Software for quality assurance

Quality assurance is the internal company procedure, which insures, that a product reaches a specified quality standard.

With **diaLIMS.QS** we provide a professional solution for all the demands of quality assurance (CAQ).
Sample management

Sample management

- Goods receipt and controls of the finished products
- In-process controls / production data acquisition
- Measuring instrument connection
- Threshold value validation

Planning

- Calendar supported sample planning
- Analysis intervals
- Task lists and reminder function

Documentation

- Audit trail
- Document management
- Threshold value catalogs, standards / norms
- Time-recording

Reporting

- Test reports
- Statistics and long-term evaluation
- Graphic display of parameter progression at the touch of a button
- Integration with Microsoft Office (Word, Excel)

diaLIMS.QM

Software for quality management

Validated analysis results through controlled conditions!

In contrast to QS the **diaLIMS.QM** will assist in securing the analysis quality standard of the laboratory. Control cards together with sample management and the corresponding documentation will immediately indicate any trend. Notification functions make sure that no testing date will be missed.

AQS

- Control samples
- Cards for rules and regulations
- Documentation of all activities
- Automatic out of control reports

Measuring equipment

- Inspection equipment monitoring
- Inspection intervals with reminder function
- History
- Evaluation and cost control

Controlling

- SOPs, regulation & guideline management
- Analysis costs and calculation
- Journal of activities
- Error analysis
- Document management

Support

- GLP, GMP, DIN EN ISO 17025, 21 CFR Part 11
- Calculation and data security
- Audit trail

diaLIMS.servicelab

Software for lab services

diaLIMS provides a number of modules to support business procedures. A perfect integration with the other modules is (CAQ, R&D) guaranteed.

Customer management (CRM)

- Serial letters, mailings, fax transmission, Campaigns
- Activities, reminders
- Price lists
- E-mail integration
- Complaint management

Order management

- Offers, orders, invoices
- Payments, deliveries, orders
- Subcontracting

Sample management

- Sample planning
- Sub sampling, sample pooling
- Threshold value catalogs
- Interfaces for DATEV, SEBAM, TEIS and others
- Device interfaces
- Findings and reports

Controlling

- Time recording and cost of analysis
- Statistics and graphics evaluation
- Full traceability
- Indicators

diaLIMS.R&D

Software for research and development

Formulation development and formulation management rolled into one. With diaLIMS.R&D you stay on top of your product development. Of course also considering batches and production orders.

Formulation management

- Components/ ingredients list, procedure instruction
- Characteristics, specifications
- Partial and sub formulations, premixes
- Solution calculation
- Ingredient composition

Formulation development

- Variant and version management
- Formulation optimization
- Cost control

Project management

- Project planning, activity management
- Under projects
- Estimate/actual comparisons
- Time recording
- GANNT diagrams
- Connection to Outlook

Hazardous substances management

- Safety data sheets
- Multilingual capability
- REACH and GHS
- Dangerous goods and hazardous substances data

diaLIMS.production

Software for production support

This is where all the threads come together! Keep a clear overview of your production stages. diaLIMS. Production is our solution for production control and -planning.

Production planning

- Production order management
- Scheduling, delivery reliability
- Formulation management, process management
- Solution calculation
- Weighing control
- ERP connection

Batch traceability

- Batch predecessor and successor (EU178/2002)
- Traffic light function with alarm for QS data
- Graphic display with interactive navigation
- Application quantity acquisition

Process control

- Measured value acquisition, production data acquisition
- SPC control cards
- Process overview
- Online machine data acquisition
- Label printing, bar code support

Incremental controls

- HACCP
- Control plans
- Automation
- Hygiene controls



Are you looking for a **laboratory information and management system** for your lab? Do you need a QS software for **quality assurance**, a laboratory for **quality management**, formulation management to assist you in **R&D** or do you want an information management system for **customer administration**?

Then we are the right partner for you!

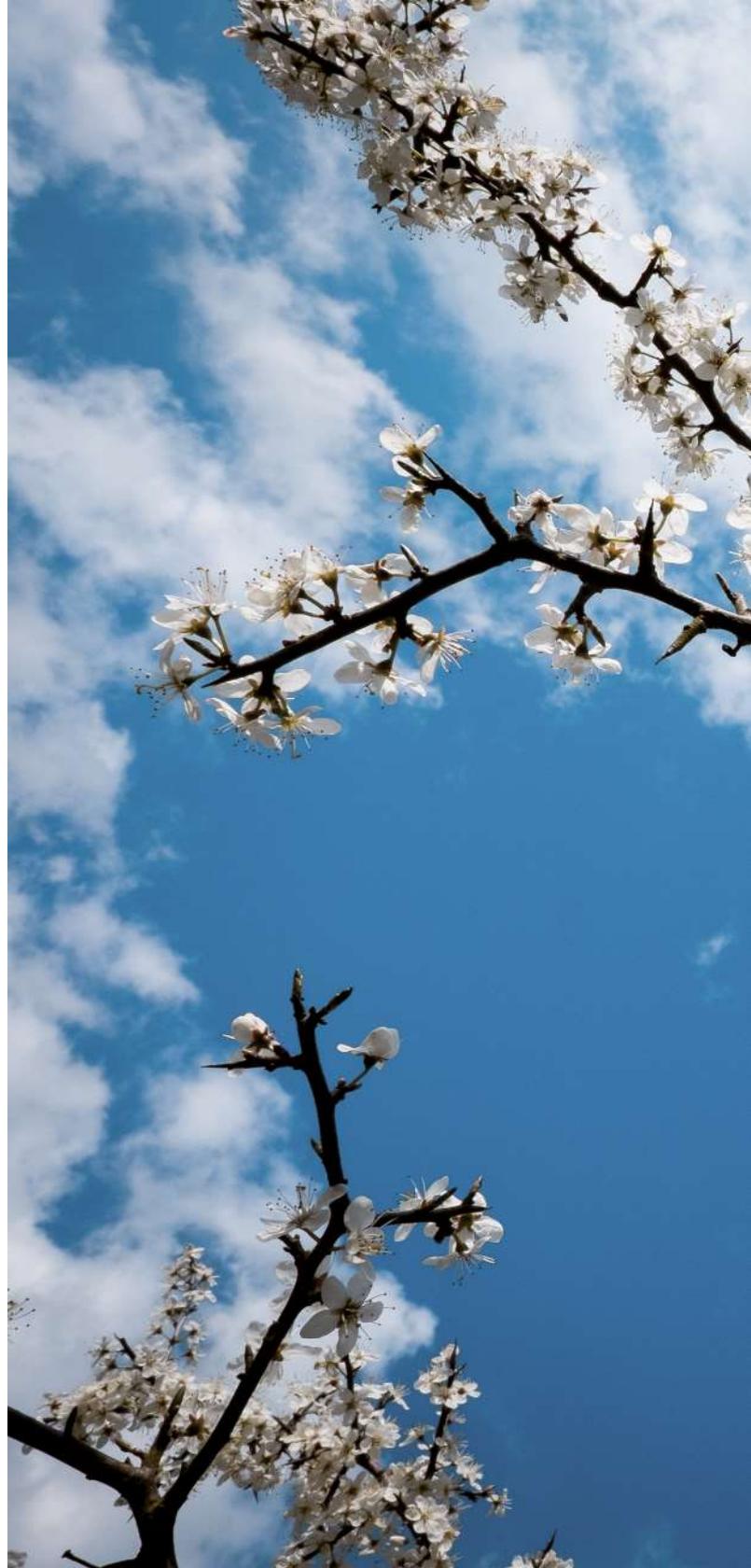
Since 1992 the company dialog EDV is dedicated to genuine customer satisfaction.

Good personal contact with our customers is just as important as quick and straightforward implementation of individual demands.

This is what makes our team stand out. Never in the history of our company has any client regretted to have invested in diaLIMS and switched to a different software.

Our software engineers are **passionate** about delivering high end programming, our designers and analysts strive for superior software solutions.

We just love what we do. And we believe you can tell.



dialog EDV
Systementwicklung GmbH

dialog EDV Systementwicklung GmbH

Am Tiergarten 62
30559 Hannover

+49 (511) 98 59 40 10
info@dialog-edv.de
www.dialog-edv.de

If you are interested in learning more about our developments, do not hesitate to contact us. We will be happy to present our diaLIMS software solution to you.

Laboratory software diaLIMS

One system for all!

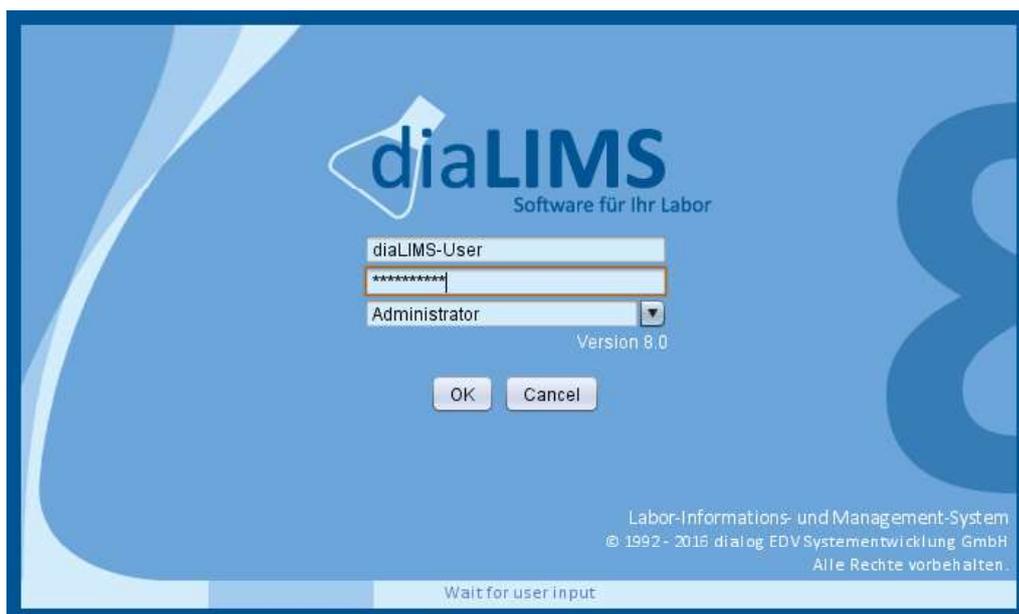
General overview

LIMS is the abbreviation for **Laboratory-Information-Management-System** and it is the international standard term for a laboratory software, which has to provide the following essential functions:

- Support of national and international regulations and norms like GLP/GMP,
- DIN EN ISO 17025 and 21 CFR part 11
- Sample management with parameters and measurements
- Device connection and automatic measured value recording
- Validation and release management
- Control cards
- Stability controls
- Incremental controls
- Random sampling plans
- Audit trail change Log
- Findings reporting, list evaluation and graphics
- Measuring instrument management

Our products are based on the core system **diaLIMS**, a **standard software product**, suitable across all industry sectors. It provides professional data management, and it is equipped with the LIMS-functions mentioned above. Moreover, it covers the demands of many other business divisions:

- R&D-formulation management, specification management
- Customer relationship management (CRM), client management
- Project management, activity management
- Invoice (offers, orders, deliveries, invoices, payments)
- Complaint management
- Document management system (DMS)
- Management of hazardous substances, material safety information and safety data sheets
- Production data acquisition
- Production planning and control
- Batch traceability



diaLIMS - Software for your laboratory

dialog EDV Systementwicklung GmbH
+49 (511) 98 59 40 10
www.dialog-edv.de - info@dialog-edv.de

Laboratory software diaLIMS

One system for all!

From a technical point of view

diaLIMS is a classic client-server-system with a relational database as a core element. In other words, it's a genuine application. It is available for the common operating systems. Any of the market-leading database systems can be used. In addition there is the **diaLIMS portal**, a browser-based solution for output and evaluation of unrestricted stored data, which is accessible via the Internet (ideally protected by VPN).

diaLIMS is very flexible and can be adapted to customer requirements by means of configuration, parameter settings and implementation of custom-built functions. To get our IT-Systems up and running quickly and economically, we offer **preconfigured system solutions** for many application areas, like for example, quality assurance, quality management or research and development.

Thanks to the entirely modular structure of our system every client can set up a tailor-made solution.

Auflistung besonderer Features und Funktionen

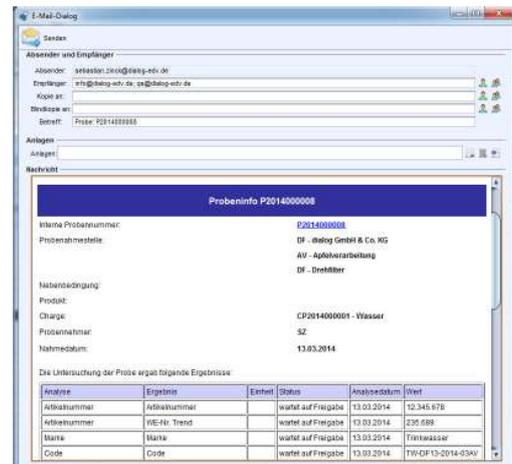
- Supports all operative and administrative laboratory operations
- **Highly transparent handling of data**, fast response times, high flexibility
- Secure **monitoring of quality parameters**
- Support of documentation and verification obligations according to **GLP (Good Laboratory Practices), ISO 9000ff, DIN EN ISO 17025 and FDA 21 CFR part 11**
- **Integration of various analyzers and automation systems**, thus relieving the employees through automated transfer of analysis results
- Fully compatible with the current databases by **Oracle, IBM DB2 and Microsoft SQL Server**
- Integration of Microsoft Outlook or Exchange for address- and calendar management as well as E-Mail support
- Powerful **reporting options**
- Complete **audit trail**
- 100% pure Java enables a **platform-independent use** of diaLIMS
- **An easy to use application** which requires little initial training
- Convenient creation of **laboratory reports**
- Fast generation of **statistical evaluations and graphics** through integration of external statistics program
- User interface, functions and data **can be adapted to individual requirements**
- Flexible **user permissions concept**
- **Full-text search** in all texts throughout the entire database
- Separate portal permits access via **Internet browser**
- Possibility of using **Tablet PCs and Smart-phones** for mobile data acquisition
- Ideal possibilities for integration of existing IT-infrastructure
- Communicates with every ERP (SAP, MS Dynamics, Soft-M ...)

E-Mail-integration

A considerable amount of our daily communication takes place via E-Mail. dialLIMS offers an **integrated E-Mail** client which permits writing and sending internal E-Mails. Of course it supports individual receivers, predefined mailing lists and extensive file attachments. If similar messages are used on a regular basis (blocking messages, complaints) you can create an **E-Mail template**. Combine the message with information out of dialLIMS data records or with predefined text blocks and thus **simplify creating your messages**. And if you need help, you can reach us by sending an E-Mails directly to our dialLIMS support from the application.

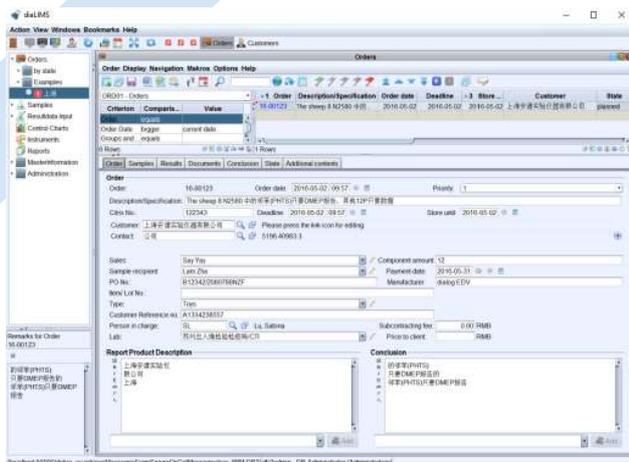
Languages / dictionary

Of course dialLIMS can be launched in **different languages**. The terms in all masks will be displayed in the chosen language. But it is also possible to **switch to a different language**: An employee in France can easily view the recorded data form his German colleague in French. In order for this to work **dictionaries for any language** can be created in dialLIMS. Using different character sets (e.g. Cyrillic) is no problem at all. Thanks to the integrated dictionary creating **multi lingual test reports** becomes an easy task: It only takes a single report template. The translation into the language, preset on the receiver's side, will automatically take place once a report is being generated.



The internal E-Mail-Client: Sending sample information via a dynamic E-Mail template.

Special features und functions



dialLIMS with English input masks and Chinese content.

Search functions

Not only when it comes to recording large quantities of data LIMS must show its strength. Stored information has to be found just as quickly and easily. dialLIMS provides **different search functions**: With the **global search function** you can search data recorded in all modules. A **quick search** in different program sections will find relevant data based on keywords. To carry out a very specific search in the dialLIMS database, you can combine arbitrary search criteria in **module filters**. This will result in precise search results. To make it an easy task to create custom search filters, the program can **suggest search keywords**. A custom search filter can be saved for later use.

Text templates

Nobody wants to type frequently used texts over and over again. This is why dialLIMS provides an **editor for text templates**. Once certain phrases have been saved they can simply be reused. Of course it can be determined, in which context the templates will be available. So you will have **different template lists** for purposes like sample evaluation, order remarks or operating instructions.

Samples module

In the beginning was the samples module...

The diaLIMS samples module was the first of our LIMS modules. In no other diaLIMS module more development effort has been invested over the years. It has been regularly enhanced with new features and was improved in detail – not least due to suggestions and demands of our customers. Together we made this into a strong module, which has proven to perform successfully in the daily laboratory routine.

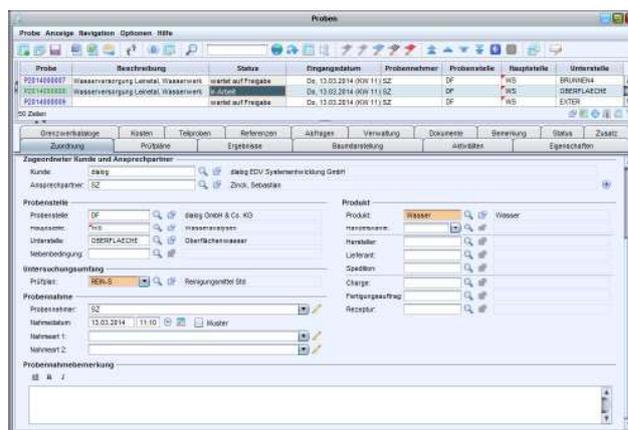
diaLIMS samples module is the **central management tool for all laboratory orders and prototypes** (air-, soil-, water samples, incoming goods samples, ready-made product controls, increment controls, stability assessment and many others). It is the core module of the laboratory system. Samples are being recorded and organized, values are documented and the laboratory process is managed. The module **supports lab technicians in their daily routines** and it provides helpful functions for all occurring tasks.

Application areas

- Sample management in quality assurance, order analysis and R&D
- Management of laboratory processes
- Measured value acquisition and -evaluation
- Assessment of analysis costs
- Graphic display of parameter trajectory

Features

- **Quick recording** of samples
- **Flexible testing extent** through assignment of configured parameter sets and / or manual parameter assignment
- **Convenient overview** of open and completed samples
- **Work flow support** through processing status of samples
- **Automatic calculation of statistic values** for samples with multiple repeated measurements
- Result values in **various formats**: numeric, text, value sets, graphics, date values
- **Unit conversion** for result values
- Simple organizing of **sub samples and aliquots**, automatic sub sample creation
- Employee-related **assignment lists**
- Automatic **cost calculation**
- Extensive **formula calculation** for result values via diaLIMS.script
- Automatic **threshold value validation** after measured value input
- Multi-stage **approval process** for individual parameters and complete samples
- **Bar code support**
- Optional **automatic measured value import** of analytical instruments
- **Audit trail**: automatic storage of all changes, transparent and traceable
- Flexibly configurable, e.g. different input masks for different prototypes (soil-, water samples, incoming goods samples, ready-made product controls, increment controls)



On the assignment page the most important sample information is summarized

Module result recording

View from the measuring station

diaLIMS module result recording offers a **second perspective** looking at the **analysis extents of different samples**. Here results are being recorded in a method-oriented manner for one or multiple parameters.

A variety of display modes permit the greatest possible range of overviews of different samples combined with ease of use. So every employee receives a certain display of the samples along with result recording which he then has to analyze for a certain parameter and thus receives a task list for his individual work area.

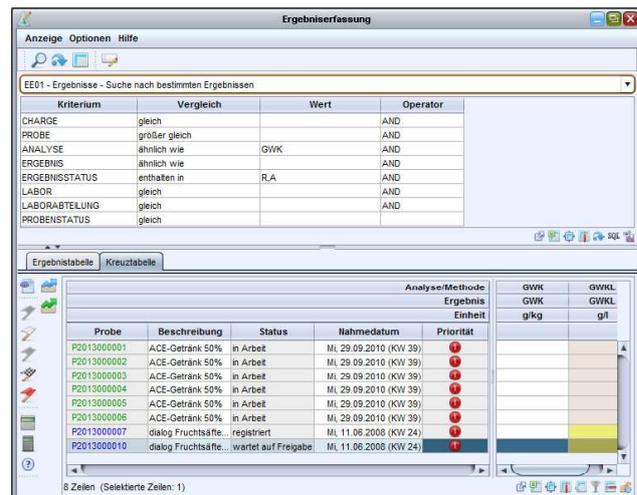
Freely configurable filters for search and display of the open parameters cover every conceivable work-related situation. Please apply the following examples to your own operating procedures:

- Show all open parameters, which already have been measured on-site at sample collection („pH level“, „conductivity“) and still have to be typewritten from the sample collection protocol.
- Show all open testing of the parameter „sensors“ for samples collected today in the division „bottling“.
- Show all samples to be evaluated for the nutrient medium „GKZ 24h/37°C“, which have been prepared the day before yesterday.

The two display modes (flat table and cross table) not only support convenient data collection but they also provide a **flexible way of ad-hoc evaluations**. Analysis lists of all samples of one sampling point over the last 12 months or an overview of the last goods leaving inspection of an article can be easily displayed to evaluate the trajectory of values. You can easily **transfer these tables into MS-Excel** at the push of a button.

Application areas

- Quick measured value acquisition
- Method-oriented work
- Microbiology input
- Ad-hoc evaluations



The screenshot shows the 'Ergebniserfassung' (Result Recording) window. At the top, there's a search bar with 'EE01 - Ergebnisse - Suche nach bestimmten Ergebnissen'. Below it is a table with columns: Kriterium, Vergleich, Wert, and Operator. The table lists various criteria like CHARGE, PROBE, ANALYSE, ERGEBNIS, ERGEBNISSTATUS, LABOR, LABORABSTELLUNG, and PROBENSTATUS with their respective comparison operators and values. Below this table are two tabs: 'Ergebnistabelle' and 'Kreuztabelle'. The 'Kreuztabelle' tab is active, showing a grid with columns: Probe, Beschreibung, Status, Nahmedatum, and Priorität. The grid contains several rows of data for different samples (e.g., P2013000001 to P2013000010) with their descriptions, statuses, and dates. To the right of the grid are columns for 'Analyse/Methode', 'Ergebnis', 'Einheit', 'GWK', and 'GWKL'.

The cross table display shows samples one below the other and parameters in columns next to each other.

Features

- **Work area- and method-oriented display** of samples: What is to be done today at my measuring station?
- **Simple overview** of open and completed parameters
- Two **display modes**: Simple list or cross table
- Individual compilation of table columns: you decide, which information will be summarized as one sample.
- **Copy function for measured values**: for example always record the same dilution increments for microbiology parameters in one step.
- **Automatic statistical value calculation** for parameters with repeated multiple measurements
- Choice of display mode for multiple measurements: mean value or single value
- Extensive **formula calculation** for result values with diaLIMS.script

Modules measuring sequences and control cards

Control cards are not kept outside a LIMS anymore

What is the current status? Your LIMS supports you by organizing while you are working at your samples. Your coworkers fill in all measured values into the LIMS according to their job specification. Then values for standard- and blank value control samples are transferred into the available Excel workbook. Open LIMS, open the device software, open Excel - and just go back and forth...

With diaLIMS **all these steps can be performed in one software application**. In the measuring sequences module all runs or sequences are recorded at the respective analyzer. All samples recorded in one sequence are also shown in the same list. You can record measured values directly in the diaLIMS module measuring sequences - **workplace-related and clearly structured**. What about control samples and their values? They can be created and completed in one go with all other laboratory samples. **diaLIMS can automatically keep the control cards**, once the basic information has been filled in the master data for each card. diaLIMS control cards are highly configurable for all conceivable applications.

Application areas

- Automatically evaluate parameters on rule cards
- Support for
 - AQS: Analytic quality assurance
 - SPC: Statistical process control
- Documentation of analyzer sequence measurements
 - Record samples measured at one measuring station
 - List control samples (arbitrary types: standard, reference material, span, blank value, ...)
- Graphic parameter trajectory from any sample

And if you don't want to record every analyzer sequence in detail, diaLIMS still provides the possibility for documentation of the daily control samples of a certain analyzer or it can record equipment testing at the beginning of each shift. In the test equipment module **control samples can be recorded for particular analyzers**. Of course the internal control cards will update the new values entirely automatic.



Probe	Status	Kontrollprobenart	D1920 CL	D1920 MC3	D1920 MC2	D1920 OP	D1920 SM4	D1920 F
P001000002	wartet auf Freigabe	Standard	50.2	49.2	0.378	0.200	18.9	0.540
P001000004	wartet auf Freigabe	Standard	0.1	0.10	0.001	0.001	0.1	0.002

Control samples in the measuring sequences module

Features

Measuring sequences

- Documentation of all analyzer runs
- **Supports finding open samples** which still have to be measured for certain parameters and allocates them to the appropriate measuring sequence
- Quickly creates **control samples** in the measuring sequence
- Seamless **traceability** of analysis results of a specific measuring sequence

Testing devices

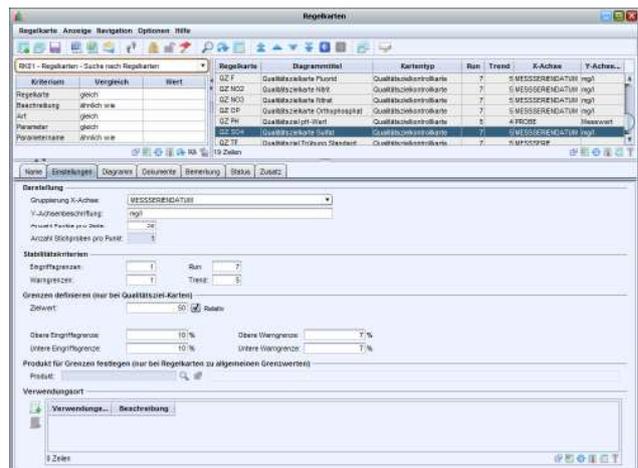
- Input of **control values for specific testing devices**
- Displays the suiting rule card in the module

Control cards

- Control cards are kept **automatically** based on measured values previously set in the laboratory process
- **Highly customizable** control card properties
- Supports **various control card types**:
- X-cross (mean value), x-tilde (median), s (standard deviation), R (range card), QO (quality objective), span (relative span) and Combinations
- Immediate and automatic display of **out of control situations**
- Export function: rule cards can be printed, saved as image file or be sent by E-Mail.
- **AQS** support: Evaluation of control samples from measuring sequences
- **SPC** support: Evaluation of certain parameters from process samples
- An ad-hoc **graphic parameter trajectory** can be displayed for every parameter in every sample.



View of a control card



Control cards offer a variety of settings which you can adapt to suit your requirements.

Modules measuring sequences and control cards

Module testing devices

„Attention please: the following analyzers must be inspected soon“

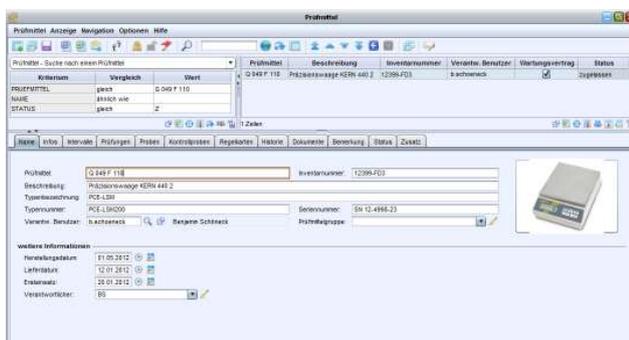
In the dialLIMS module **testing device** management you can add and **manage all testing devices and miscellaneous laboratory equipment**. Besides general inventory information you can additional details about the properties of a testing device like maintenance data or information about the manufacturer. But the most important feature is probably that the periodic maintenance intervals of the devices are documented in a well structured and clearly presented manner. This way you ensure, that the testing devices deliver measuring results in the demanded precision. This is a requirement of GLP and ISO 9000.

Application areas

- Testing device quality mgmt according to GLP and ISO 9000
- Conducting control samples per day, per shift or the like
- Documentation of testing device history and costs
- Keeping and managing control cards for testing devices

For each testing device **any number of independent inspection intervals can be defined**, for example one interval for maintenance, another for calibration and official verification. The intervals can independently be activated and stopped. An automatic calendar function allows to **schedule inspections** for your system. Once an inspection is due or upcoming dialLIMS will remind – either the employee responsible for the device, the department or every employee of the laboratory. At the push of a button dialLIMS compiles a **daily task list** which contains all testing devices to be inspected. Of course the list can also be created in advance. Overdue dates will be highlighted in color.

At the completion of the inspection the obtained results are recorded in dialLIMS. Formulas can be used as a calculation aid. The convenient data input and view of the results are managed in a clearly arranged cross table. Controls which have to be performed once per shift or per day can be recorded manually, independent of predetermined intervals. Such a control sample can be created at the push of a button. In addition to the control values **automatic control cards** can be kept. They are clearly presented on a separate page. In this way, by means of control cards, a direct connection is established between sampling results and control sample values. Furthermore, **comments concerning the results** are displayed in the diagram. It is possible to **print a control card** in the form of a report.



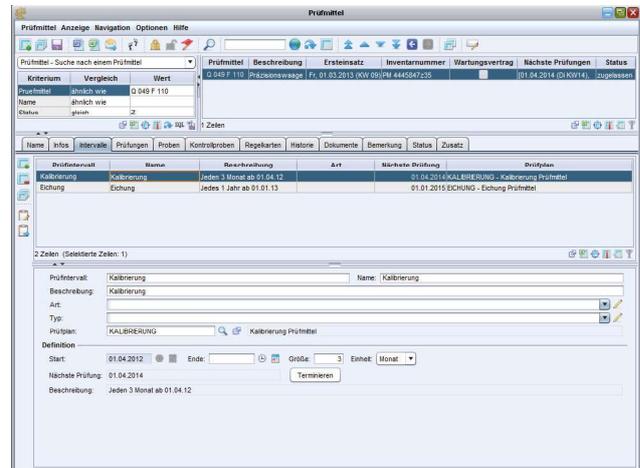
Zu jedem Prüfmittel können umfangreiche Inventardaten erfasst werden.

Recording results from a testing device monitoring can alternatively be performed with a **mobile recording device** like for example a built-in bar code-scanner. So the inspection of testing devices at external locations, like manufacturing, can be accomplished straightforward and simple.

Of course the dialLIMS module testing devices permits to add all kinds of different devices, so **inventory data and warranty information of the entire technical equipment** can be managed together.

Features

- Extensive input fields to **record all relevant testing device data**
- Automatic generation of **identification numbers**
- Information on supplier, identification number and maintenance service
- **Arbitrary number of inspection intervals** for every testing device
- Automatic preparation of inspections for the predetermined intervals
- Creates **task lists and testing device data sheets**
- Generates testing device certificates as MS-Word, OpenOffice or PDF-documents
- **Timely reminder** for scheduled inspections
 - Active per E-Mail
 - Passive as quick filter
 - Warning notice when logging in to the system or when using a testing device
- **Recording of control samples** directly at the testing device including evaluation on rule cards
- Recording of test results with integrated **check for limit violation**
- Direct **connection of analyzers**
 - Use of native instrument software
 - Transfer of results and raw data into dialLIMS
- **Raw data archiving**
- **Document management** e.g. for calibration instructions
- **Testing device history, cost overview and event logging**
- Assignment of testing devices for methods and information on the testing device used for result recording of samples
- Blocking of testing devices for further use
- **Mobile recording** of values at the location of an analyzer with the help of tablet computers or smart phones



For a testing device various inspection intervals can be determined.

