



Analytix

– a single system that works for all disciplines

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INTRODUCTION

A single system that covers the entire workflow of the laboratory – regardless of discipline.

Today's laboratories are being consolidated into larger and larger units with multidisciplinary operations. At the same time, the laboratories need a flexible LIS in order to maintain connectivity with surrounding systems.

CGM Analytix is designed to provide logic-based support for laboratory work processes, regardless of discipline. The system is multidisciplinary, with support for clinical chemistry, microbiology and hispathology/cytology* – all integrated in the same system.

With CGM Analytix, you also get a cost-effective system with an intuitive and user-friendly user interface. Thanks to its scalability, the system can be used for everything from point-of-care testing (POCT) at a hospital clinic to a hospital-based university laboratory and multinational organisations.

CGM Analytix is a well-proven system designed to provide access 24 hours a day 365 days a year. The system has proven operational reliability, which gives you a high level of security and reliability at the laboratory. This is combined with CGM Analytix's great flexibility when it comes to connection and integration with ancillary equipment and other applications associated with laboratory operations.

"CGM Analytix is a completely digitalised system that creates quick and accurate requests, good workflow at the laboratory and reliable notification of diagnosis results."

Geir Nordheim, Project Manager Nye Ahus.

MODULES & FUNCTIONS

Work in today's laboratories can be rather stressful. To ease the situation, there must be good program support, not only through the help of system functions, but also through easy navigations to find the functions needed for the work process in question.

CGM Analytix has a main menu with a structure that follows the primary processes Pre-analysis, Production and Post-analysis. To further enhance the user-friendliness, the most frequently used functions for each primary process have easily accessible buttons.

PRE-ANALYSIS

- Registration of requests, manually, electronically or via OCR/OMR
- Dynamic concept for complete request as support for supplementing requests
- Choice of Test based on current investigation
- Identification of previously conducted tests makes it possible to reduce costs
- Identification of supplementary orders that cannot be carried out because the sample is too old
- Tests can be linked to studies (projects)
- Biobank management at the sample level (Swedish Biobank Act)
- Label printing for primary samples and secondary samples (media)
- Sampling functions, including printing of marking material and lists
- Connection of pre-analysis equipment (sample sorter)
- Function for arrival check of requests and tubes
- Decision-making support for arrival registration (multilab environment)
- Working request in paper form can be created for electronic requests
- Package management for handling logistics of the packaging in which the test tubes are packed and transported
- Referred samples to external laboratories





PRODUCTION

- Fully integrated analyzer platform for handling on-line analyzers, including monitoring functions
- Manual result registration and technical and medical validation
- Access to multidisciplinary history picture for the patient
- Pre-defined work lists for manual handling and transmission to on-line analyzers
- Stock lists for short and long-term storage of samples
- Parallel testing of current and previous sample(s)
- Culture management with registration of findings, quantity, actions and resistances
- Condition-controlled activation of panels
- Work list for panels (Resistance list)
- Panels with resistance interpretation both for zone and MIC
- Condition-controlled activation of actions (electronic action list) with information on actions for culture analyses (such as tests, fermentations and API)
- Work list for actions (Action lists)
- Condition-controlled culture messages
- Condition-controlled standard request patterns
- Quick reply for quick choice of complete results, including findings, panel with standard resistances and approval
- Resistance histogram – Shows all of a species' registered results for resistance to an antibiotic
- Resistance history – Shows a patient's resistance results for all registered bacteria findings
- Saved strains can be stored in a stock list
- Combined work list for actions and resistances (Multipoint)
- Production checks, laboratory lists and error lists
- Quality control in the form of daily and long-term follow-up (Westgard and RilibÄK)
- Automatic ordering of verification analyses depending on conditions
- Reflex tests depending on conditions and analyzer
- Culture robots as on-line analyzers
- Integrated POCT
- Monitoring program
- File archive – possible to link files and web pages to a request, test or finding
- Programmable rules with conditions based on several analyses plus request source, etc.

POST-ANALYSIS

- Flexible result management (time and destination control, grouping, etc.)
- Flexible result distribution (EDI, fax, e-mail, printer, PDF, telephone, cumulative lists)
- Result format per request source group and test group
- Search and monitoring functions for results
- Export to local and national organisations for communicable disease control (SmiNet, MSIS etc.)
- Accounting and debiting functions
- Statistics – production, accounting and quality control.
- Export to EARSS
- Studies can be linked to a stock list for research purposes (Biobank for studies)

ADMINISTRATION AND MISCELLANEOUS

- Easy-to-use administration of support program for register maintenance and settings
- Multidisciplinary test and service catalogue with systems – components as per IUPAC's NPU codes
- Export of the total test and service catalogue to external systems
- Integrated customer and patient register
- Biobank information management
- Patient alarm with register for maintenance of various alarm types
- Logging of all changes to requests, samples and analyses
- Logging of access to requests, samples and analyses (Access logging)
- Logging of all changes to register and settings



PRE-ANALYSIS

REQUESTS – MORE THAN JUST TESTS AND FIXED TEST GROUPS (PROFILES)

In many cases, the treating physician faces illness symptoms that make it hard for him/her to order the exact tests that should be conducted. The physician may only indicate an illness pattern and/or a probable diagnosis that he/she wants to confirm or rule out.

CGM Analytix has the functionality that enables the requester to order an open question in the form of an investigation. The investigation can describe an illness pattern and/or a probable diagnosis. With an investigation, the treating physician gives the laboratory the opportunity to decide itself what test should be carried out. It is possible to have a mix of fixed and optional tests for investigations. The fixed tests are ordered automatically and the optional tests can be selected based on the circumstances of the request. Information critical to the laboratory for test selection is data (clinical data, symptoms), patient history and the identity of the request source. Investigations give the laboratory great opportunity to speed up the entire medical treatment process in some cases as the laboratory then directly investigates an illness pattern to a greater degree, thereby reducing the number of patient visits with the treating physician. Examples of investigations include Meningitis, Hepatitis and Anaemia.

SIMPLER SAMPLE MARKING AND HANDLING

The conditions for marking samples are different from customer to customer (sampling unit). From some customers, you may receive well-marked samples with a unique LID (Laboratory ID) for each tube. From other customers, you get samples marked only with personal ID. Regardless of the quality of the marking from the customer, each primary tube must have a unique marking for handling of the sample at the laboratory. Even though unique sample marking is already done at the customer, the laboratory sometimes also marks the samples in separate number series (Internal number) during arrival registration.

CGM Analytix handles the following identities (IDs) so that the sample receipt and laboratory work processes can work as efficiently as possible.

Request Identity

Request Identity (RID) is used to identify a request and all of its included samples or an electronic request.

Laboratory ID

Laboratory ID (LID) – the unique barcode marking that is found on the primary tube that is the primary sample container and that is a combination of RID and tube code. The tube code is the marking the sample receives at the time of test order, for example a specific tube or container that is also specific for the test. The tube code is either a prefix before the RID or a suffix after the RID.

Internal Number

Internal Number (Internal No.) – the secondary sample number that can be used as an internal sort term at the laboratory. The internal number is used to divide the samples into a secondary order based on section. A section can, for example, correspond to a physical unit at the laboratory, such as TB, Blood, Faeces and Urine.

Marking material for Request (RID) and Sample (LID) can be created during request registration, sampling or arrival registration. Secondary sample numbers (Internal No.) can be created during arrival registration if pre-marked secondary tubes (Media) are not used. With the help of optional settings, you determine if and when labels should be printed. The labels are then printed automatically. This makes handling of the samples when they arrive at the laboratory as quick as possible.

REDUCED COSTS THROUGH REUSE OF EARLIER RESULTS

Certain test results remain valid for a long period of time or even forever. As some of the analyses are expensive to perform, it can be a large, unnecessary expense for a hospital, for example, which orders large numbers of analyses from an internal or external laboratory.

CGM Analytix has a function to reuse earlier results for a patient. With this function, you can decide for each test how long earlier results should remain valid. During registration or arrival registration, you can obtain a warning if earlier results are available. This makes it easier for you to decide whether a test must be conducted again or if the earlier results should be sent to the requester.

INCREASE CONTROL OF SENT SAMPLES THROUGH PACKAGE MANAGEMENT

As laboratory organisations are being consolidated into larger and larger units with multidisciplinary operations, the process support used by the laboratory must be able to handle an increasingly greater number of samples. In conjunction with this, tougher demands are being placed on traceability and safety for the logistics associated with sample transport.

Our package management support gives you increased control over the samples sent between the different units of a laboratory organisation. With package management, it is easier to see where the package is located and arrival registration is handled in a single step at the receiving laboratory.

.Handling and monitoring packages

The Handle package function provides supporting for handling packing of the package. Handle package is used to create new or modify existing and open/closed packages. It is possible to add and/or remove one or more LID.

Monitor package handles tasks such as unpacking, audit trail registration and arrival registration of the package and its contents. Monitor package enables you to trace a package that has not yet arrived at its correct recipient, for example.



PRODUCTION (CLINICAL CHEMISTRY)

Today's clinical chemistry laboratories are expected to work more efficient than ever before. This means that tougher and tougher demands are placed on the automation of work processes. Automation regards both ancillary test equipment and communication with such as well as the processes that must be managed by a laboratory information system. Automation can often be set up for the large process flow, but support is also required to sort out the requests/analyses that must be assessed by a human eye.

CGM ANALYTIX ICOM – UNBEATABLE ANALYZER MANAGEMENT

Laboratories routinely update their analyzers with new models that come out on the market at a rapid pace. This creates a demand for a quick and quality-controlled procedure for handling new analyzers. The laboratory information system must also be able to handle everything from 'small' POCT analyzers to 'major' automations with several underlying analyzers.

CGM Analytix contains a fully integrated analyzer platform, Icom, that easily integrates and interacts with other systems (analyzers). Icom is assisted by a powerful configuration tool that handles templates per analyzer type. This gives you a big advantage and simplifies administration when there are many analyzer of the same type in a large lab organisation. The program has a logical tab system from which settings can be made for communication protocol, flag management with associated comments, placement, reflex tests, etc.

Communication between the analyzer and the database is working in real time. The authorised administrator can start, stop and monitor communication for an analyzer regardless of whether he/she is at the home lab or at another hospital. Installation and start-up of new analyzer connections is done without interruption operations and therefore does not affect communication for other analyzers.

CGM Analytix Icom has support for IP communication, serial (RS232) and data files. The communication component (Windows service) is run either on one or more dedicated server clients or, if necessary, on one of the standard workstations.

CGM Analytix currently offers prepared connections to more than 250 analyzer types. Development of connections to new systems is part of our routine work and we deliver within about 2-4 weeks. With CGM Analytix design and construction for Icom, we can offer new analyzer connections at one of the lowest prices on the market.

QUALITY CONTROL WHEN VALIDATING PATIENT RESULTS

In order to ensure the quality of analysis work, quality control tasks must be managed properly and it must be possible to analyse and validate in conjunction with patient result validation. Quality control functions are often found for the different analyzers or middleware used at the laboratory. However, use of these functions requires that you work in different systems with larger training efforts and fewer opportunities to compile the laboratory's entire quality control program.



CGM Analytix is equipped with a number of quality control functions based on control rules from Westgard and RiliBÄK – all to simplify quality control management and make it uniform at the laboratory. The quality control system is independent of the analyzers. The collection process is automatic and handling is the same for all users.

If a control rule is triggered (issues warnings or makes a rejection) warnings are given to you as a user. Affected patient results can also be put right into hold position and, if automatic approval is configured for patient results, these are also invalidated. As user, you must then decide whether the quality control results should be included or excluded and decided whether the patient results can be used or must be re-analysed.

AUTOMATED APPROVAL WITH PROGRAMMABLE RULES

Automatic approval is an important part of today's laboratory process and it produces great efficiency gains for the clinical chemistry laboratory organisation. Often, it is not enough for approval to be based on fixed result limits per test. Consideration must instead be given to the results of other tests, patient age and gender and who made the request.

Together with the simple rules that can be set up in CGM Analytix for approval per test, it is also possible to use programmable rules. These combine the results of several tests, patient and requester information and the quality control results in order to approve an event. Approval can be final or only serve as a technical approval, which means that the test is sent for clinical authorisation. Examples for other events for programmable rules are adding comments, adding a test and setting or modifying results.

MANUAL TECHNICAL VALIDATION/ RESULTS MANAGEMENT

Regardless of whether you use automatic approval in a large or a small scope, certain results must always be validated manually.

In the Technical Review program, you can assess both patient and control results and add or modify results. Validation is normally per origin (analyzer or worksite) or per pre-defined work list. During validation, the operator can set status to Approve, Hold position, For clinical authorisation or Disapprove. Everything is logged, including rejected and deleted results.

Request information

As support for validating the selected test, request details are given. Request details are shown in a field at the bottom left of the form and are expanded information on request, patient, test and results. It is possible to configure which information is shown directly. Additional information can be shown through a short-cut command.

History

When validating results, it is important to obtain a history of previous results. These are always visible at the bottom of the main form, with no need to change windows. This also shows the disciplines associated with the historic results for the patient in question. This gives you a quick understanding of what history is available. With a single press of a button, you can also open the Historic results dialogue for access to a more detailed history.

AUTOMATIC REQUESTING – MAKING SURE THAT A SPECIFIC TEST IS ACTUALLY REQUESTED

The analysis process does not always mean that only the requested tests are conducted. Additional tests may be necessary depending on the results of an initial screening test. In many cases, the requesting of these tests is automatic depending on the results of the initial test and who stands as requester.

To simplify and speed up work at the laboratory, CGM Analytix enables you to set up automatic test requesting both directly during the requesting process and later in the production process. Automatic requesting during the production process can occur right when a result is collected by Icom (reflex test) or in conjunction with approval, when verification tests are often requested. Automatic requests are based on approved limit values per test and the requester. If you would prefer, they can instead be based on programmable rules that give consideration to additional information on the request.

CLINICAL AUTHORIZATION - AUTHORISED OPINIONS BY DOCTORS

Regardless of whether the technical validation process is manual or automated, certain tests are sorted out for clinical authorisation based on their results or other factors. In order to handle such tests, there must be a process support that helps the doctor find the right request for clinical authorisation.

The Clinical authorisation function gives the doctor effective support for authorised opinions. Special authorisation is required to be able to start clinical authorisation. Test results can be sent for clinical authorisation manually or via configuration based on test and requester.

The authorisation window presents one request at a time. The authorised opinion can be added at the request level or the test level. Once clinical authorisation is complete for a request, the program automatically moves on to the next pending request. There are special modules for medication and abuse tests.

The opinion is stored in the form of free text together with date, time and signature of the responsible doctor. The opinion can comprise of pre-defined short comments combined with free text.

Using macros to find requests with special conditions

In the clinical authorisation, the assessing doctor can use self-defined macros to find requests that fulfil specific conditions. Once a macro-based request search has been carried out, it is possible to write an opinion or perform a clinical authorisation for all of the requests at the same time.

An example when macros can be used is Hepatitis B:
Macros: HbsAg=Negative and a-HBc=Negative and aHBs<2
The clinical authorisation can be: No hold points for current or previous review of infection with Hepatitis B.



PRODUCTION (MICROBIOLOGY)

In the field of microbiology – particularly bacteriology and molecular biology – development is moving at a rapid pace. In bacteriology, much knowledge has recently been gained on how antibiotics must and should be used, not only based on a group of bacteria but also based on a more defined level of bacteria typing. The PCR technique has given microbiology laboratories a huge array of opportunities, particularly for typing and verifying bacteria. The development of work processes and analyzers for PCR is advancing at a rapid rate, which demands a flexible and powerful laboratory information system that can combine this with the traditional culture processes.

BACTERIOLOGY

With today's demands for efficiency and knowledge on bacteria resistance to antibiotics, there must be well-developed and flexible manual process support for cultivation so that it is possible to easily and quickly produce results regarding antibiotic treatment for common bacteria and to provide good support to catch bacteria that require more carefully-considered treatment with antibiotics.

CULTURE MODULE PROVIDES OVERVIEW

The culture module in CGM Analytix handles tests/samples based on bacteria findings. It gives you a complete overview of the actions taken to come to a specific finding as well as any resistance decisions that have been made. The culture module handles both technical review and clinical authorisation

The module's well-structured selection function gives you support to refine the selection of relevant samples/tests based on a number of different alternatives, such as:

- LID and Internal No.
- Time period
- Culture group (group of tests), which can be compared to a sample type
- A specific requester or group of requesters

This can be combined with additional selections to find samples in different status levels:

- No findings
- Findings with no technical review
- Findings with no clinical authorisation
- Incomplete actions
- Final findings
- Medically approved findings – Marked for preliminary results
- Non-medically approved findings – Marked for preliminary results

Combinations of these selections can be used to find relevant samples at different steps of the work process.

Quick registration of the most likely findings with hierarchical handling of findings

To facilitate registration of the initial finding, the most likely finding can be grouped per culture group. During registration of the initial reading/choice of finding, the system suggests appropriate findings.

You can organise the findings in the levels Negative, Suspect, Family, Genus, Species and Type so that they are handled following a tree structure. Each finding can be linked to a parent finding (finding text at superordinate level). If you use this option, an appropriate short list will automatically be provided during the next reading/choice of finding.

Simplifying results management with panels

In the culture module, different panels are activated automatically when you select a finding (depending on choice of finding), culture group and requester. A panel is a collection of drugs, such as antibiotics, antimycotic and antiviral agents. This means that the system is prepared, making result entry quick and easy for you. The configuration of panels gives a standardised work approach, where the user does not need to keep track of which drugs must be used for a specific finding. The hierarchy for findings is also used by the panels, so that a standard panel can be created for a genus, for example. Subordinate species and types inherit the panel of the superordinate genus, but can be replaced by a specific panel for e.g. one or several subordinate species.

In addition to the included drugs, the panels can be configured with a number of different functions, such as:

- Other drugs, i.e. other common drug choices for the panel in question. This makes it possible to quickly find other relevant drugs.
- Panel comments that are automatically activated for relevant findings.
- Standard resistance that are automatically activated independent or depending on a specified finding.
- Conditions for deviations that cause drugs to be automatically added, removed or marked as internal. The conditions can be configured based on, for example, a specific type of requester, group of requesters or patient age.

It is also possible to mark included drugs and other drugs as internal so that they are not given in the report. The order for how drugs are presented to users and requesters can also be specified.

Breakpoints/Limit values

Breakpoints/limit values for millimetre zones and MIC values can be configured on all levels of findings. The limit values are handled for both RAF and EUCAST. The given millimetre values can then be used to set S, I or R automatically based on the results you indicate. S, I and R can also be specified manually.

Automatic activation of Actions

In the culture module, different procedures are activated automatically just like panels when you select a finding (depending on choice of finding), culture group and requester. A procedure is a collection of actions and trials, such as agglutinations, isolations, stainings, fermentations or APIs.

Once you have completed the first reading of the plates, you can create an action list, which serves as a "to-do list" and contains actions for each sample/test based per finding. The list is created electronically, but can also be printed out. In addition, you can view all actions with associated results linked to the respective finding per sample or investigation in the culture module, with traceability based on the time they were performed and by whom.

Resistance correction

With today's knowledge base, it is possible to use the results of one antibiotic to reliably say whether another antibiotic is S, I or R.

In CGM Analytix, you can manage this with resistance correction. Resistance correction means that one drug's result (SIR) for a specific finding (depending on culture group and requester group) automatically generates a result (SIR) for one or more other drugs.

Culture messages

Certain combinations of findings and antibiotics require specially attention from the user or results recipient. For example, pneumococcus, which is sensitive to PcV and resistant to Cefuroxim, could generate a warning.

Culture messages make it possible for you to configure comments of the types warning, test comments and resistance comments. The warnings are shown when you select a finding or drug. Test comments and resistance comments are saved, linked to the test or drug. Culture messages can be activated based on individual or combined conditions of finding, drug with or without results or a specific requester group.

Quick results

As soon as the initial reading, certain cultures generate a known result that enables the user to immediately select finding, quantity, panel, standard resistance and whether the test should be approved or sent to clinical authorisation.

With CGM Analytix, you can configure a set of quick results that you can easily activate during reading with two button presses. Each quick result can be set up with a finding, a quantity and whether the finding should be reported as a result or if a standard resistance should be set. Since panels and procedures are activated upon selection of finding, these are also activated based on the finding given in the quick result.

History

During validation, it is often interesting to look at previous results for the patient in order to form an opinion.

With a single press of a button, you can also open the Historic results dialogue for access to a more detailed history. You can then limit the history dialogue to test or profile to find results for the test or tests you are interested in.

CULTURE AUTOMATION

At present, a number of culture robots are available on the market for blood cultivation. There are also analyzers for direct cultivation. These analyzers place new demands on analyzer communication compared to those traditionally needed in clinical chemistry.

The Icom analyzer platform of CGM Analytix enables you manage blood cultivation analyzers. Blood cultures are ordered as a test with results that are Positive or Negative. You can configure CGM Analytix to automatically order a culture test if the results are Positive. In the configuration, you can choose to send the results of both tests or only the automatically ordered culture test.

Analyzers for direct cultures can also be connected to CGM Analytix. In such cases, Icom also handles the findings and resistances in a structured manner.

REPORTING TO SMI & INFECTION CONTROL ORGANISATIONS

Certain bacteria must be monitored and sent to local or national functions that serve to monitor the spread of disease.

In CGM Analytix, you can configure the findings that are to be sent to organisations or doctors who work with infection control. This can be configured so that results or other collections are automatically sent out depending on finding, quantity, culture group and drugs as well as their results. To whom, how often and on what occasions (technically or medically approved) can also be specified.

A direct electronic connection for export to SmiNet (Sweden) is available.

SEROLOGY

Serological methods mean that measuring equipment must often be recalibrated and older results can therefore not be compared with new results from the same patient.

Parallel run of samples

CGM Analytix contains functionality for running samples in parallel. A parallel run is carried out after arrival registration from within Technical review or with a freestanding program that can be based on a specific test. The function gives you a full overview of possible samples to run in parallel to the original sample, also known as the urgent sample, through a simple dialogue. You can limit the number of possible samples to run in parallel per patient based on quantity, test or section. Each available sample shows information on sample date, Internal No, LID, analysis and results. There is also a link to the storage list. This makes it possible to directly see the storage information of the frozen sample and create a picking list with the exact storage location of the sample.

MOLECULAR BIOLOGY

Molecular biology's PCR technique has developed possibilities to quickly show bacteria without cultivation. After cultivation, PCR can be used for typing and for difficult-to-cultivate or dead bacteria. Factors such as the analyzers' handling of PCR tests places tough demands on laboratory system flexibility as many analyzers are managed with pre-defined work lists.

Flexible pre-defined work lists

With CGM Analytix pre-defined work list, you can create work lists in an extremely flexible manner. A great deal of the flexibility depends on how you fill lists. For example, lists can be filled per row or column, per test or sample, with replication and with permanent or dynamic positions set for analyses and controls. Once the work list is complete, it can be printed out for manual handling or sent to analyzers. The results, whether collected right from the analyzers or entered manually, are selected in Technical review of the work list and you then evaluate the entire list.

Interpretation of results

The results from PCR analyzers are predominantly numeric results. To interpret these, use the limit values linked to results texts for translation to Positive or Negative.

Automatic typing request

If PCR is used for typing, new analyses can be automatically requested depending on bacteria group. This gives you quick and efficient process support from culture to PCR diagnostics. For each finding, you specify which PCR test is to be requested when the finding is registered.



POST-ANALYSIS & ADMINISTRATION

USER-FRIENDLY CONFIGURATION AND ADMINISTRATION

Today's laboratory operations are dynamic, with continual improvements that require quick adaptation of the laboratory system to changes such as new analyses, methods, requesters and different types of limit values.

CGM Analytix is a standard system with a large number of configuration possibilities to meet all of the variations in the requirements and desires of various laboratories. Configuration and system administration is handled via user-friendly Windows programs. This gives you a system with easy administration and that takes system administration to a whole new level of those used to character-based administration in ini files and the like.

MULTIDISCIPLINARY TESTS & SERVICE CATALOGUE

The test catalogue includes the terms investigation, tests and method as per IFCC-IUPAC. The system also handles the Norwegian NEKLAB coding.

- A test is linked to properties such as the discipline to which it belongs, clinical information, price based on requester, clinical authorisation and whether it is part of a profile.
- One or more methods can be linked to a test depending on which laboratory the analysis is carried out at.
- Method-specific properties – reference areas, limit values, rounding limits, links to analyzers, properties affecting primary labelling during blood drawing, properties that affect secondary labelling when marking sequence (microbiology/pathology)
- Other properties linked to the test catalogue are method descriptions, blood drawing instructions, laboratory manual and centralisation (which laboratory performs the test depending on where registration occurs)

COORDINATE SEVERAL HOSPITAL LABORATORIES IN ONE SINGLE SYSTEM

County council and major organisations place great demands for coordination and efficient use of resources. To meet these demands, the organisations are consolidated into large units with laboratories that are spread out geographically but use the same systems.

With CGM Analytix, you can flexibly administrate a multisite environment. The database manages different logical units, which can be blood drawing sites, medical centres, sections, local hospitals or central hospitals. How these relate to one other as regards the analyses on offer is configured in the database. The user is aided by the system's decision-making support during registration or arrival registration in order to direct the samples to the right laboratory.

With the highly-advanced multilab functionality found in CGM Analytix, you have support to make analyzer utilisation for medical services more efficient. Safety and reliability are increased because you can simply redirect samples to another laboratory in the event of analyzer malfunction.

GREAT FREEDOM WITH CGM ANALYTIX REPORTING MANAGEMENT

The system is an extremely powerful tool for reporting management. The different report formats – EDI, printer results, cumulative lists and e-mail, can be combined per requester and be sent to different destinations at different time points. The possibilities are practically endless and give the laboratory great freedom. In addition to the ability to choose a result format and when a result should be printed, you can also group together tests and request sources and distribute reports in different formats based on these groupings. For example, you can have different formats for culture and serology tests.

TRACEABILITY WITH AUDIT TRAIL

Operations place great demands on traceability of both changes and who has viewed a specific result.

In order to ensure traceability, all system events are logged. Each user has his or her own electronic operator id, which is logged together with the changes made.

INTEGRATION, REPORTS AND STATISTICS

Integration must be easy

It is easy to integrate CGM Analytix with other medical systems in the surroundings. The system currently communicates with the most common records systems, PAS systems, accounting systems and analyzers on the market.

Reports and statistics for follow-up

The system contains a number of standard reports for different types of follow-up. You can easily access them via the main menu. It is also possible to use Crystal Reports to create your own reports for various purposes – something that many of our customers do today. Your own reports can also be published so that they become accessible in the CGM Analytix main menu.

With the help of our add-on product, you can automatically run and distribute reports on a regular basis.

QUALITY CONTROL FOLLOW-UP

Checks are used in the daily work with quality control rules that more or less immediately indicate whether there are any problems with the analyzer in question. Despite the use of quality control rules, it is not always possible to immediately see minor deviations, such as drifts in the measurement scale with the daily quality control work. Special follow-up programs are required to catch these deviations.

CGM Analytix makes it possible to use long-term quality control, with integrated reports for calculations to more easily detect trends and present statistics. An example of a graph for detecting trends is a cumsum plot. It is also possible to export quality control checks to external calculation programs, such as Excel.



TECHNICAL INFORMATION

Database:

- Microsoft® SQL Server 2005/2008

Recommended server configuration (minimum requirements):

- Pentium Xeon 2,4GHz, dual processor (32 bit)
- 2 GB RAM
- Approx. 20 GB available, 15,000 RPM, Raid
- Standard graphics card

Operating system:

- Microsoft® Windows XP, Vista, 7, Server2003/2008

Network:

- 10/100 Mbps

Analyzer connection via:

- RS232 on PC
- Network protocol (TCP/IP)

Analyzer server (PC) (running Windows Service for communication):

- Pentium 233Mhz
- 500 MB RAM
- 15 MB available HD

Analyzer connection method:

- ASTM protocol
- POCT1A
- Supplier-specific output/input method

Electronic request connection to laboratory computer system:

- Integrated open interface tool – LabTalk
- (For example, HL7, EDIFACT, XML etc)

ABOUT COMPUGROUP MEDICAL

CompuGroup Medical is one of the leading eHealth companies worldwide. Its software products, designed to support all medical and organizational activities in doctors' offices and hospitals, its in-formation services for all parties involved in the healthcare system and its web-based personal health records contribute towards safer and more efficient healthcare. The services of CompuGroup Medical are based on its unique customer base of around 370,000 doctors, dentists, hospitals and networks as well as other service providers.

CompuGroup Medical is the eHealth company with the biggest coverage among eHealth service providers worldwide. The company operates in 14 European countries, Malaysia, Saudi Arabia, South Africa and in the USA and currently employs around 3,000 people.

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