TSD Laboratory
Agility and accuracy in the laboratory

TSD
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Solution for every specialty

- Better decision support quicker results.

- Quality control.

- Smart handing for microbiology results.

- Intelligent tools for transfusion medicine and prod uct management.

- Powerful tools for continuous processes in cellular pathology.

- Seamless device integration.

- Robust volume processing for blood science laboratories.

- Fast effective communication of results.

- Connected laboratories.

- Linked internal resources.

- Advanced billing systems.

- Robust security features.

- Comprehensive reporting tools.

Laboratories are an essential part of effective modern healthcare. They provide clinicians with vital information that helps them make life-saving decision diagnose conditions and monitor patient treatment.

With such a critical role in healthcare delivery, laboratory scientists and support staff depend on the very latest technologies to help them carry out their jobs. They need software solution that work the way they work, that integrate with the devices and technologies they use, and that speed up the analysis they do every day.

TSD Laboratory is designed with the needs of those professionals in mind. It is a comprehensive laboratory information management system that helps scientists, technicians and management staff to track samples and testing processes, communicate results to other health professionals, and monitor costs and reporting

Compatible with the most widely used information standards and protocols in the industry, it helps to connect laboratory employees with people throughout the healthcare ecosystem.

TSD Laboratory includes dedicated functionality for every laboratory discipline, and each module of the software has been designed to allow users to create intelligent workflows, helping them to complete laboratory tasks in the most efficient way.

With more years of experience in laboratory computing, we understand what analysts and technicians require.

Our unique tools help employees to be more efficient in their work, and to share data rapidly with other clinicians and healthcare professionals.

Our dedicated laboratory technology has been widely adopted across the healthcare world.

One important factor behind this widespread uptake is the flexibility of the software.

Managers can customize the product to function exactly as their organizations require,

While individual users can modify specific functions to suit the processes within a particular laboratory environment.

TSD Laboratory has a modular construction so organizations can choose to roll out the product in stages. Many laboratories prefer to deploy one module at a time, ensuring a smooth transition process from legacy systems.

TSD Laboratory integrates with other TSD products, our modular healthcare system. The transfer and integration of information, such as order communications and results reporting, between the different technologies is seamless. By combining flexible products

With a broad base of knowledge and expertise, TSD can help you design and build a combined solution to fit your exact requirements

All laboratory organizations understand that healthcare technology ultimately has a single purpose: to improve patient care. By increasing the speed and efficiency of laboratories, TSD Laboratory helps institutions to do just that.

Solution for every specialty

TSD Laboratory is designed to support a full range of specialist laboratory discipline, including blood science, microbiology, transfusion medicine and pathology. Discreet modules allow managers to choose the functionality they need. Each module offers broad benefits and specialist features.

Better decision support quicker results

With hospitals and clinics demanding results faster than ever, laboratories face tough challenges. They need to produce a greater quantity of quality output more quickly and increasingly with fewer employees. TSD Laboratory addresses this problem by providing technicians with a highly flexible, intuitive set of tools that accelerates their work and increases the efficiency of the laboratory as a whole.

Users can also take advantage of comprehensive customization features to configure how the ordering and reporting systems function, to provide the fastest, most intuitive interface. They can set the decision criteria and assessment rules for tests to suit their own laboratories, so that the application intelligently reacts to results with appropriate follow-up suggestions. This speeds up the decision-making process, and helps to ensure that analysts take the right steps towards accurate results.
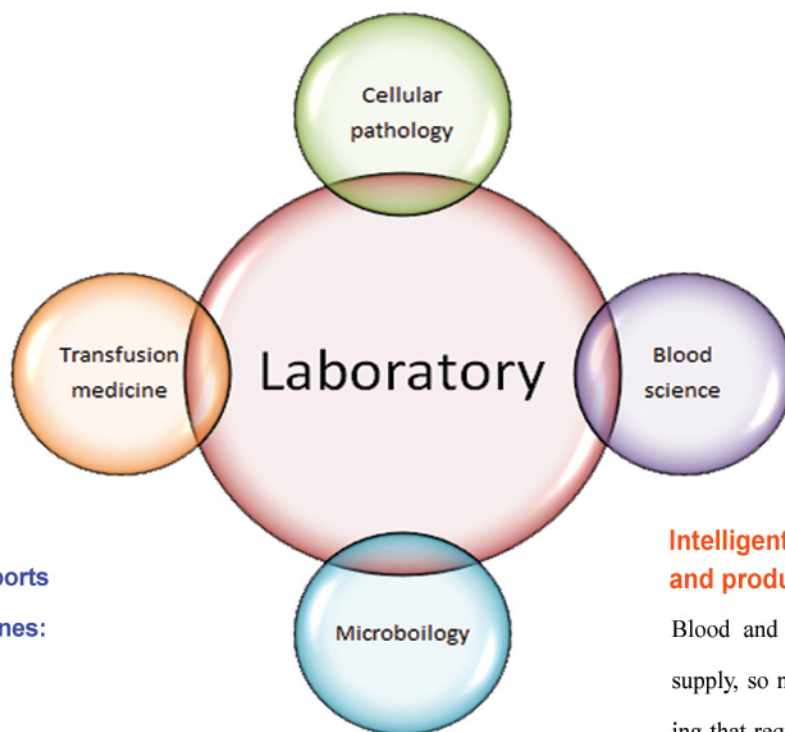
During every analysis process, TSD Laboratory displays procedural stages in a clear, consistent way. When a user is working on a complex process, an innovative zoom function focuses the screen on the current step. For conditions that require long-term analysis, such as tuberculosis investigation, TSD Laboratory contains integrated follow-up and alert systems. Users can also save time by creation starter-sets that make frequently requested examinations easily accessible as soon as they open the TSD Laboratory application.

Quality control

Dealing with increasing volumes of samples and results can make it difficult for institutions to maintain a consistent level of quality in their output, so TSD Laboratory includes a range of tools to improve sample management. Medical technologists can use the software to print primary and secondary barcodes for the identification of samples, as well as to scan samples into designated refrigerators or to make reservations.

The software also includes advanced quality control functionality. Users can create workflows to ensure that all real-time data collected is validated against laboratory- specific measurements. They can use the unique predictive function to identify and correct errors at an early stage during trend analysis. Naturally, the software record every laboratory activity, so any errors that do "arise are retained in a log file where they can be traced at any time, while a messaging system automatically alerts managers

TSD Laboratory supports the following disciplines:
- **Blood science.**
- **Microbiology.**
- **Transfusion medicine.**
- **Cellular pathology.**

Smart handing for microbiology results

TSD Laboratory includes a range of features to accelerate and enhance the work of microbiologists. Results can be presented in a variety of ways within the application, including resistance tables. TSD Laboratory automatically compares results with standard reaction patterns for organisms to produce information on possible inconsistencies, and the system immediately displays deviations from the norm. Resistances can be recorded by direct entry (sensitive, intermediate, resistant) or by recording the inhibitory averages An integrated system automatically generates an on-screen warning when it detects a reportable organism.

Powerful tools for continuous processes in cellular pathology

Processing time is often much longer for cellular pathology samples than in other laboratory disciplines, and in many cases samples have to be stored indefinitely. TSD Laboratory helps technicians and medical practitioners track each sample throughout its lifetime Smart workflows cover every aspect of the analysis process, while single-click access to stored sample information helps laboratory workers respond to requests more quickly.

Intelligent tools for transfusion medicine and product management

Blood and blood components are always in short supply, so managing inventory efficiently and ensuring that requests from clinicians are met quickly is a constant challenge for blood banks. TSD Laboratory contains powerful features for managing blood and blood products. Automated, electronic labeling is combined with comprehensive patient history management to maintain consistent records and ensure safe transfusions.

The application automatically imports electronic dispatch notes, so it can capture additional details such as antigen genotype information This enables technicians to safely cross-match patients with atypical red cell antibodies and helps to ensure safe transfusions. TSD Laboratory includes dedicated functionality for managing autologous blood donations The application also encompasses a powerful reporting module that gives users insight into every aspect of blood bank work, including issuing.

Seamless device integration

With more and more analysis equipment available to clinical chemists, it is important that software systems can handle an expanded flow of electronic data. TSD Laboratory is built using industry-standard protocols, so it integrates seamlessly with a wide range of laboratory technology Users can feed results into the system from analytical devices such as electrophoresis equipment, and display the resulting graphics on-screen or integrate them directly into reports.

Linked internal resources

Modern laboratories need to work hard to make the most of their people and their technical resources TSD Laboratory helps forge connections between sites as an institution grows, creating a single organizational and technical unit. The application uses the latest cluster technology to help IT staff connect workstations to a central server This allows laboratories to use expensive modern equipment more economically and to create a highly available, stable back-up system Not only that, but it helps staff across the organization communicate with one another more effectively, improving productivity.

Advanced billing systems:

In an increasingly competitive market, one of the great strengths of TSD Laboratory is that it improves the efficiency of laboratories as businesses.

The application includes a powerful accountancy module that covers the billing needs of both private and public laboratories, while accommodating collective invoicing, and the latest insurance processes.

Accounting staff can split orders, modifying them based on criteria such as cost units, tariff tables and account regulations.

Robust security features:

Laboratories are under pressure to deliver quality output faster than ever. At the same time, it is crucial for institutions to maintain the strictest levels of security and to protect patient privacy.

TSD Laboratory includes comprehensive rights management features, with a federated access system that gives managers complete control over sensitive data.

While all users can store documents and records in a central archive, only authorized individuals can view documentation related to specific samples and patients.

Comprehensive reporting tools

Today's laboratories handle vast amounts of data TSD Laboratory includes powerful reporting features to give analysts complete control over everything stored in the application's central repository Users have immediate access to statistics for performance, products, equipment, turnaround times, patient data and account Results can be stored for later processing or exported to an external application These features aid in both internal and external auditing procedures.

Robust volume processing for blood science laboratories

Hematology laboratories regularly process thousands of samples per day. In order to maintain high quality, clinically safe results, technicians dealing with these large volumes depend on software solutions to reduce their manual workloads. Often, the most crucial function of these systems is highlighting the small number of samples that need individual attention. TSD Laboratory features powerful tools to help laboratory workers manage samples and automate validation processes. They can use the software to create sets of conditional rules, tailored to suit their laboratories, which identify the samples that need manual processing. The flexibility of the software also extends to its reporting functions, which allows laboratories to publish results in a variety of formats.

Connected laboratories:

Organizations are increasingly pooling their resources to produce pathology networks, operating as clusters, and referring complex cases to specialist laboratories. In these situations, all the institutions involved require software systems that make data communication simple. TSD Laboratory efficiently organizes the dispatch of referrals to off-site laboratories, so that users can monitor examination requests that have been sent,

evaluate the results and compile reports and invoices quickly. It also maintains consistent structures for patient and sample information, reducing the chances of administrative errors.

Fast effective communication of results:

All the modules in TSD Laboratory are supported by the Laboratory Information Centre (LIC). This module supplements the functionality of TSD Laboratory with paperless remote order requesting and results enquires this greatly improves interoperability between laboratories and requesting medical institutions.

A quick information system within TSD Laboratory provides laboratory staff with data on all current orders, as well as updating users on processing status Clinicians, meanwhile, can check electronic results quickly when. Working on the ward and print out daily results for their patients with the latest results. Results can also be transmitted directly to a patient's file in the hospital information system.

In addition, TSD Laboratory has sophisticated point-of-care testing capabilities Combined with LIC, it allows ward staff to view results on screen immediately after analysis has been performed Testing in this way opens up the results to TSD Laboratory's built in comparative features, so the patient can be assessed according to reference values relevant for age, gender and other criteria.

TSD Laboratory includes everything a modern laboratory requires to work efficiently and cost effectively, helping to support the highest standard of patient care.

At TSD, we have years of experience designing and building software tools for the healthcare community. Our expert implementation and training services help you and your employees and you can be sure that our expert support teams will be there when you need them.

So work with us, and take a step ahead.