

CDS



CLINICAL ASSESSMENT

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About CDS

WHO WE ARE:

CDS Pathlabs is a premier B2B provider of clinical pathological services, offering a comprehensive, one-stop solution for specialized parameters and customized diagnostic profiles. Backed by a distinguished Scientific Board with expertise across all therapeutic areas, we deliver tailored solutions to meet diverse diagnostic needs.



WHY CDS PATH LABS:

The CDS Pathlabs Scientific Board plays a pivotal role in upholding scientific excellence, ensuring stringent quality standards, and fostering innovation in diagnostic testing. This multidisciplinary board comprises experts from various therapeutic areas who collaborate with the technical team to design novel diagnostic profiles and advance scientific analyses.

What We Believe:

“EVERY CUSTOMER INTERACTION MATTERS”

- We believe every interaction with our customers is a chance to make a positive difference. Whether guiding a patient, answering a question, or delivering accurate results, each moment is an opportunity to build trust and show our commitment to excellence.
- Our goal is not just to provide services but to create lasting relationships built on trust, reliability, and respect. By valuing every interaction, we go beyond expectations, making a meaningful impact on the lives of our customers and the communities we serve.

“WE REQUEST YOU TO WORK WITH US TO GROW TOGETHER,
FOSTERING INNOVATION, COLLABORATION, AND SHARED SUCCESS”

Every Customer Interaction Matters



#Proudtobe CDS Team Member

Framework:

B. Pawan Kumar

CEO

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What We Provide:

B2B Diagnostic Services

Partner with small labs, clinics, and hospitals.

Clinical Research Services

Specialized Clinical Trials testing for all The Phases and studies.

Hospital Lab Management

Comprehensive management for hospital labs.

B2C Services

Convenient home collections with online access to reports.

Employee Health Camps

Health check-ups tailored for businesses.

Franchise Network

Grow with us through low-investment franchise models.

Veterinary Lab Services

We provide veterinary lab testing to ensure accurate diagnosis, preventive care, and effective treatment for your animals.

Kit Validation Procedures

We Provide Service kit validation ensures accuracy, reliability, and compliance by evaluating precision, sensitivity, specificity, stability, and regulatory adherence before clinical use.

Autolumo A-6200:
A Revolutionary Chemiluminescence Immunoassay System from Autobio Diagnostics



The Autolumo-6200 is a cutting-edge chemiluminescence immunoassay (CLIA) system designed by Autobio Diagnostics, a leading global provider of in vitro diagnostic solutions, exclusively marketed by Matrix Labs Diagnocare in Indian Market. This innovative system is engineered to deliver high-performance, automated, and versatile testing capabilities for a wide range of clinical applications.

KEY FEATURES OF AUTOLUMO-6200

High-Throughput Testing

- ▶ The Autolumo-6200 boasts a high-throughput capacity and integration--single module 600T/h, 1-4 units up to 2400 T/h with triple track for sample management enabling laboratories to process a large volume of tests efficiently and accurately.

Advanced Chemiluminescence Technology

The system utilizes advanced CLIA technology, providing superior sensitivity, specificity, and precision in test results. The system's advanced CLIA technology and automated result analysis ensure high accuracy and reliability in test results.

Automated Operation

- ▶ The Autolumo-6200 features automated sample handling, reagent dispensing, and result analysis, minimizing manual intervention and reducing the risk of human error.

Wide Range of Assays

The system supports a 100+ broad menu of assays, covering various clinical disciplines, including infectious diseases, cardiovascular diseases, and oncology.

User-Friendly Interface

- ▶ The Autolumo-6200 features an intuitive and user-friendly interface, allowing laboratory professionals to easily operate the system and manage test results.

Cholinesterase

Concerning the Cholinesterase Test and Its Significance CDS PATHLABS

Cholinesterase Test

This blood test measures the activity of cholinesterase enzymes in the blood. Cholinesterase enzymes are crucial for the proper functioning of the nervous system as they break down the neurotransmitter acetylcholine, preventing overstimulation of nerves, muscles, and glands. Low levels of cholinesterase can indicate exposure to certain pesticides or nerve agents, while high levels may be a sign of liver disease. Monitoring cholinesterase activity through this test is important for diagnosing and managing conditions related to nerve function and liver health.

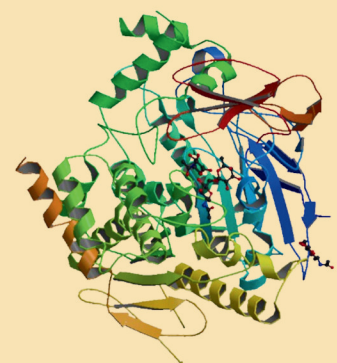


Figure1. Structure of acetylcholinesterase
Courtesy: Pedia.com

Importance of the Test:

Diagnosing Poisoning

The test is essential for diagnosing poisoning by organophosphate or carbamate pesticides, which inhibit cholinesterase activity. Exposure to these chemicals can lead to symptoms like muscle weakness, breathing difficulties, and even seizures. Early detection through cholinesterase testing can help healthcare providers provide appropriate treatment and prevent further complications from pesticide poisoning. Regular monitoring of cholinesterase levels is crucial for individuals who are at risk of exposure to these toxic substances.



Figure 2. identifying the chemical poisoning in your blood by cholinesterase test

Monitoring Liver Function

Since pseudocholinesterase is produced in the liver, low levels of this enzyme can indicate liver dysfunction or disease. Regular monitoring of liver function, including pseudocholinesterase levels, can help healthcare providers detect early signs of liver problems and provide timely interventions to prevent further damage. It is important for individuals at risk of liver dysfunction or disease to undergo routine testing to ensure their overall health and well-being.

Genetic Variation

The test can identify individuals with inherited pseudocholinesterase deficiency, which can cause prolonged paralysis or respiratory depression when given certain anesthetic drugs. This information can be crucial for healthcare providers when determining appropriate anesthesia dosages and avoiding potential complications during surgery. Understanding genetic variations in pseudocholinesterase levels can help personalize treatment plans and improve patient safety.

Occupational Health

Regular testing is important for people working with pesticides or other chemicals that can inhibit cholinesterase, helping to monitor their exposure and prevent health issues. Additionally, individuals with genetic variations in pseudocholinesterase levels may require adjustments to anesthesia dosages to prevent adverse reactions. Healthcare providers should also consider the potential impact of pseudocholinesterase levels on drug metabolism and response when developing treatment plans.

Medical Procedure

It helps determine the cause of prolonged apnea or muscle paralysis after surgical anesthesia, especially when succinylcholine is used. Monitoring pseudocholinesterase levels can be crucial in preventing complications during anesthesia administration, as individuals with genetic variations may be at increased risk for adverse reactions. Understanding the impact of pseudocholinesterase levels on drug metabolism can also help healthcare providers tailor treatment plans for optimal patient outcomes.

Importance in Anesthesia Administration

The cholinesterase test is a vital tool in identifying individuals at risk for complications during anesthesia, particularly when succinylcholine is used. By monitoring pseudocholinesterase levels, healthcare providers can personalize treatment plans to ensure safe and effective outcomes for patients undergoing surgical procedures.

Cholinesterase is an enzyme that breaks down acetylcholine, a neurotransmitter involved in muscle contractions. In the nervous system, cholinesterase helps regulate muscle movement and plays a crucial role in anesthesia administration by metabolizing certain drugs like succinylcholine.

Why the Test is Important

Discusses the various reasons for conducting the test, including diagnosing poisoning, monitoring liver function, and identifying genetic variations. Additionally, cholinesterase levels can be used to assess exposure to certain pesticides or nerve agents. Monitoring cholinesterase activity is crucial in occupational settings where individuals may be at risk of exposure to these harmful substances.

How the Test is Performed

The test is typically performed by collecting a blood sample from the individual, which is then analyzed in a laboratory to measure cholinesterase levels. Results can help healthcare providers determine if there are any abnormalities in enzyme activity that may indicate certain health conditions or exposure to toxic substances.

Interpreting Cholinesterase Test Results

Interpreting the results of a cholinesterase test involves understanding the enzyme levels in your blood and their implications for your health. Here are key points to consider:

Normal Levels:

Acetylcholinesterase (AChE):

Typically found in nerve tissue and red blood cells

Pseudocholinesterase (BChE):

Primarily found in the liver and plasma.

Low Levels of Cholinesterase:

Poisoning: Low levels may indicate exposure to organophosphate or carbamate pesticides. These chemicals inhibit cholinesterase activity, leading to symptoms like muscle weakness, difficulty breathing, and even seizures.

Liver Disease: Since pseudocholinesterase is produced in the liver, low levels can suggest liver dysfunction or disease, such as hepatitis or cirrhosis.

Genetic Deficiency: Some individuals have a genetic condition that results in low pseudocholinesterase levels, which can cause prolonged effects from certain anesthetic drugs (e.g., succinylcholine).

High Levels of Cholinesterase:

Recovery from Poisoning:

Elevated levels can indicate recovery from previous exposure to cholinesterase-inhibiting chemicals.

Genetic Variants:

Some people naturally have higher levels due to genetic variations, which may not have significant health implications.

Clinical Implications:

Chronic Exposure:

Regular testing for people working with pesticides or chemicals is crucial for early detection and prevention of health issues.

Surgery and Anesthesia:

Identifying individuals with cholinesterase deficiency is important for safe administration of anesthesia.

Understanding your test results can help guide appropriate medical interventions and lifestyle adjustments. If your results are abnormal, it's essential to consult with your healthcare provider for further evaluation and management.

Blood collection process and how the sample is analyzed

Prior to the test, it is important to follow any specific instructions provided by your healthcare provider, such as fasting or avoiding certain medications. Additionally, informing your healthcare provider of any medications or supplements you are currently taking is essential for accurate interpretation of the results. During the blood collection process, a healthcare provider will insert a needle into a vein in the arm to draw the blood sample. The sample is then sent to a laboratory where it is analyzed using specific techniques to measure cholinesterase levels accurately.

Instructions on any preparations needed before taking the test.

Proper preparation can help ensure accurate results for a cholinesterase test. Here are some general guidelines to follow:

Fasting:

Fasting is not typically required for this test. However, follow any specific instructions given by your healthcare provider.



Medications:

Inform your healthcare provider about all the medications, supplements, and herbal products you are taking. Certain medications can affect cholinesterase levels and may need to be temporarily stopped before the test.

Avoiding Exposure:

If you work with pesticides or other chemicals that can affect cholinesterase levels, try to avoid exposure for a few days before the test. Follow any specific guidelines provided by your doctor.



Alcohol and Tobacco:

Avoid consuming alcohol and using tobacco products for at least 24 hours before the test, as these can impact enzyme levels.

Relaxation:

Stress can influence cholinesterase levels. Try to stay calm and relaxed before the test.

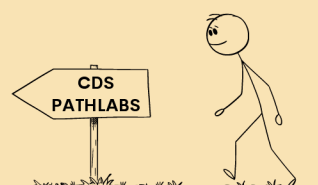


Follow Doctor's Instructions:

Always follow any additional instructions provided by your healthcare provider, as they may have specific recommendations based on your health and medical history.

On the Day of the Test:

-  **Arrival:** Arrive at the CDS PATHLABS or clinic or home collection on time.
-  **Hydration:** Stay well-hydrated; drink plenty of water unless instructed otherwise.
-  **Documentation:** Bring any necessary documentation, including identification and your doctor's order for the test.



By following these guidelines, you can help ensure that your cholinesterase test results are accurate and reliable. If you have any specific concerns or questions, be sure to discuss them with your healthcare provider.

Conclusion:



In summary, cholinesterase tests are essential diagnostic tools that measure the activity of acetylcholinesterase and pseudocholinesterase enzymes in the blood. These enzymes are vital for nerve function and the breakdown of certain drugs and toxins. Regular monitoring through cholinesterase tests can help diagnose and manage conditions such as pesticide poisoning, liver disease, and genetic enzyme deficiencies.



Understanding the importance of preparation and interpreting test results accurately can provide valuable insights into one's health and guide appropriate medical interventions. Whether used for routine health checks, occupational safety, or medical diagnostics, cholinesterase tests play a crucial role in maintaining overall health and well-being.



Note from CDS PATHLABS



The cholinesterase test stands as a cornerstone in the realm of diagnostic tools, offering profound insights into the body's enzyme activity and overall health. By measuring the levels of acetylcholinesterase and pseudocholinesterase, this test aids in diagnosing and monitoring conditions that affect the nervous system and liver.



Understanding the importance of this test, proper preparation, and accurate interpretation of results can significantly enhance patient care and safety. Whether it's for identifying pesticide poisoning, assessing liver function, or uncovering genetic enzyme deficiencies, the cholinesterase test is a vital component of comprehensive healthcare.



At CDS Path labs, we are committed to providing precise and reliable testing services, ensuring that every individual receives the best care possible. Regular monitoring and timely intervention can make a substantial difference in maintaining health and preventing long-term complications.

For more information or to schedule a test, please contact us at CDS PATHLABS, Hyderabad. Your health and well-being are our top priority.

Framework:

Dr. Maruthi Prasad
Head of Bio-Chemistry

https://www.linkedin.com/posts/anitaflynn_ad-express-newsletter-july-activity-7091443056826089472-ukNN/

Flow cytometry

Flow Cytometry Overview:

Flow cytometry is a sophisticated laboratory technique that enables the detailed analysis of cells and particles in suspension. Widely used in clinical and research settings, it plays a crucial role in diagnosing diseases, monitoring treatments, and advancing our understanding of cellular biology.

How does flow cytometry work?

Basic Principle

Flow cytometry involves suspending cells in a fluid stream and passing them through a laser beam. The interaction between the light and the cells generates data on their size, complexity, and fluorescence properties.

Fluorescent Probes

Cells or particles are often labeled with fluorescent dyes or antibodies that bind to specific proteins. When illuminated, these probes emit light that can be detected and quantified.

Multi-Parameter Analysis

Flow cytometry can analyze multiple characteristics of each cell simultaneously, such as size, shape, and specific molecular markers.

What is CD4 and CD8 T Cells Flow Cytometry?

The CD4 and CD8 T cell flow cytometry test is widely used in clinical and research settings to evaluate immune function. It plays a critical role in diagnosing and managing diseases such as HIV/AIDS, autoimmune disorders, immunodeficiencies, and infections. CD4 and CD8 are surface proteins expressed on specific subsets of T lymphocytes (T cells), which are a crucial component of the immune system. These proteins define the functional roles of T cells in coordinating immune responses. The test quantifies the number and proportion of CD4+ helper T cells and CD8+ cytotoxic T cells in a blood sample.

What is HLA-B27 Testing?

HLA-B27 is a genetic marker associated with autoimmune disorders like ankylosing spondylitis, reactive arthritis, and other spondyloarthropathies. Our flow cytometry-based testing provides precise and reliable results.



Why Choose CDS Path labs for Flow Cytometry?

High Sensitivity & Specificity

Advanced cell-marker analysis ensures accurate detection.

Rapid Turnaround Time

Results delivered within timeframe for quick clinical decisions.

Expert Analysis

Performed by highly skilled pathologists and technicians.

Who Should Consider this Test?

- ➡ Patients with chronic back pain, stiffness, or joint inflammation.
- ➡ Suspected cases of ankylosing spondylitis or related conditions.
- ➡ Family history of HLA-B27-associated diseases.

CDS Path Labs Offer

CDS Path lab offers comprehensive flow cytometry diagnostic services of immunodeficiency, leukemia, lymphoma and other hematological diseases. CDS lab utilizes Attune NXT Flow Cytometry from Thermo Fisher Scientific is a compact and versatile system designed to deliver high performance cell analysis with its innovative acoustic assisted hydrodynamic focusing technology. This system avoids compromise between data quality and higher sample rates by uncoupling cell alignment from sheath flow.

Framework:

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Head - Molecular Genomics

Framework:

Dr. Rajashekhar Reddy. N
Molecular Scientist

Note from CDS PATHLABS



At CDS Path labs, we are committed to providing precise and reliable testing services, ensuring that every individual receives the best care possible. Regular monitoring and timely intervention can make a substantial difference in maintaining health and preventing long-term complications.

For more information or to schedule a test, please contact us at CDS PATHLABS, Hyderabad.
Your health and well-being are our top priority.



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In case of a medical emergency, contact your doctor or emergency services immediately.
Any legal disputes related to this article fall under the jurisdiction of courts in Hyderabad, India.

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CDS PATHLABS

WE

Thank You!

For Your Time & Trust in Us

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