

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ  
مَا نَعْبُدُ إِلَّا اللَّهَ  
وَمَا كُنَّا مِنَ الْمُشْرِكِينَ



العنوان

**Medical Laboratory Technology**

**One modular unit**

**By**

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المقدمة

Introduction  
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# What is Medical Laboratory Technology?

I've tracked down the answers to some common questions about medical laboratory technology.

## Medical laboratory techniques:

Medical laboratory it is a branch of medical technology science which is complex subject branching a number of **different disciplines** study different types of techniques in association with **analytical pathology** and only the diagnostic supports help in differentiating functional from organic and idiopathic from non-idiopathic



# What Do Medical Laboratory Technicians and Medical Technologists Do?

They analyze blood, and cells and body fluids, in search of clues that aid in the detection, diagnosis, and treatment of disease.

They are the "detectives" of the health care team, working behind the scenes to ensure quality patient care.



**So the role of using laboratory is to assist in the:**

**a) Diagnosis. b) Treatment. c) control of disease.**

Medical Laboratory Technicians and Medical Technologists who work in Microbiology help to diagnose other bacterial infections they also identify viruses, parasites, and fungi that cause infections. They work with specimens such as blood, urine, sputum, feces, body fluids, and tissues and are trained in appropriate infection control procedures to protect themselves and others from infectious agents. They play a key role in the both the diagnosis and treatment of infections and stand ready to recognize and

The Medical diagnostic laboratory is more than the backbone of treating person, it is the very soul of diagnosis making better diagnosis dose mean better patient care.



## Where do Medical Laboratory Technicians and Medical Technologists work?

When it comes to the challenges and rewards of medicine, the medical technologist has the best of both worlds. They work in all areas of the clinical laboratory and test for everything from the AIDS virus to zinc toxicity. The information that they give to the doctor influences the medical treatment that the patient will receive

Medical Technologists and Laboratory Technicians work in • Hospital laboratories

- Reference laboratories
- Public health laboratories
- Blood banks
- Research centers
- Forensic laboratories
- Environmental and food industry laboratories
- Fertility Clinic
- Pharmaceutical Company
- Research Laboratory
- Veterinary Laboratory
- And many other places

# Types of techniques:

The subject provides information regarding the methods used in laboratory analysis. There are many types of techniques used, which may be: 1-Manual 2- Mechanical.

The increase demands on the laboratory inevitably resulted in the introduction of more specialized and sophisticated procedures including:

- Mechanization
- Automation
- Data processing
- How to interpret the reports of investigations conducted.





**e.g.** for reading the results of any test, there are many ways to know the results like:

**a) Visual techniques:** methods which were used in the past, depend on the eye to giving the results such as: - Read the pH of solution by filter paper methods (litmus paper: red = acid and blue= alkaline).

**b) Color techniques:** modern than the first which gives the results of any test by reading the density of its color by using different types of instruments like colorimeter, photometer, spectrophotometer.

**c) Automation techniques.** Methods using a machine to complete analysis like autoanalyzer, hemoglobinometer, Ms-9

For all above these technique are useful in all kinds of medical laboratory technique.

Which includes many diagnostics brunches such as :-

- Clinical Biochemistry
- Cytology
- Histopathology
- Cytogenetic
- Genatic
- Parasitology
- Immunology Microbiology
- Bacteriology
- virology
- Hematology..
- chemistry



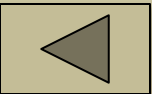
In the laboratory, a highly-skilled medical team of pathologists, specialists, technologists and technicians work together to determine the presence, extent or absence of disease and provide valuable data needed to evaluate the effectiveness of treatment.

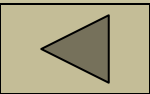
The fact is, the practice of **modern medicine would be impossible without the tests performed in the laboratory**

## **Medical Lab Technician Job Description**

Your typical duties as a medical Laboratory Technicians will likely include the following:

- Monitoring tests and procedures
- Preparing blood, urine and tissue specimens for analysis
- Using sophisticated laboratory equipment to look for bacteria, parasites and other microorganisms
- Analyzing the chemical content of fluids
- Matching blood for transfusions
- Testing for drug levels in the blood





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