

Molecular Infectious Diseases Tests

Farabi Medical Laboratory provides advanced molecular diagnostic testing for a broad range of infectious diseases using real-time multiplex PCR.

Our assays offer high sensitivity and specificity for both bacterial and viral pathogens, ensuring timely results that support accurate diagnosis, and targeted therapy.

Comprehensive Infectious Disease Panels

1. Respiratory Panel (17 Pathogens)

Detects major viral and atypical bacterial agents of respiratory infections.

Specimen: Nasopharyngeal/oropharyngeal swab, BAL, tracheal aspirate.

Report time: 24–48 hours.

Includes: SARS-CoV-2, Influenza A/B, Rhinovirus, Parainfluenza 1–3, RSV A/B, Human Bocavirus, Adenovirus, Metapneumovirus, HCoV-229E, NL63, OC43, HKU1.

Haemophilus influenzae, Enterovirus, HSV-1/2, CMV, EBV, VZV, HHV-6/7/8, Parvovirus B19, JC Polyomavirus, etc.

2. Sepsis / Bacterial Panel (14 Pathogens)

For rapid detection of major sepsis-causing bacteria from blood and sterile fluids.

Specimen: Whole blood, positive blood culture, CSF, BAL/sputum.

Report time: 24–48 hours.

Includes: Pseudomonas aeruginosa, Klebsiella pneumoniae, Staphylococcus aureus, Acinetobacter baumannii, Escherichia coli, Streptococcus pneumoniae, Enterococcus spp., and others.

4. Gastrointestinal Panel (4 Pathogens)

For diagnosis of acute bacterial gastroenteritis.

Specimen: Stool or rectal swab.

Report time: 24–48 hours.

Includes: Shigella, Campylobacter, Salmonella, Yersinia enterocolitica.

5. STD – Sexually Transmitted Infections Panel (9 Pathogens)

Comprehensive molecular detection of common and co-infecting STIs.

Specimen: Vaginal/cervical/rectal swab, first-catch urine, vesicle fluid.

Report time: 48–72 hours.

Includes: Chlamydia trachomatis, Mycoplasma genitalium, Neisseria gonorrhoeae, Ureaplasma spp., Gardnerella vaginalis, HSV-1/2, Trichomonas vaginalis.

3. Meningitis / Encephalitis Panel (21 Pathogens)

Simultaneous detection of bacterial and viral CNS pathogens.

Specimen: CSF, whole blood, brain biopsy, vesicle/throat swab.

Report time: 24–48 hours.

Includes: E. coli, Streptococcus pneumoniae, Group B Streptococcus, Listeria monocytogenes, Neisseria meningitidis,

6. Neonatal Sepsis Panel (7 Pathogens)

Covers major neonatal pathogens including viruses and intracellular bacteria.

Includes: CMV, E. coli, Listeria monocytogenes, Staphylococcus aureus, Ureaplasma urealyticum/parvum, Chlamydia trachomatis.

Specimen: EDTA blood or CSF.

Report time: 24–48 hours.

7. Neonatal Meningitis Panel (3 Pathogens)

Includes: E. coli, Listeria monocytogenes, Streptococcus Group B.

Specimen: CSF or blood.

Report time: 24–48 hours.

Designed for pediatric encephalitis and viral CNS infections.

Includes: HSV-1/2, CMV, EBV, VZV, HHV-6, HHV-7, Enterovirus, Parechovirus, Parvovirus B19, Adenovirus.

Specimen: CSF, blood, urine, vesicle fluid, bone marrow, epithelial scraping.

Report time: 24–48 hours

8. Pediatric Viral CNS Panel (11 Pathogens)

Individual Pathogen Testing

In addition to multiplex panels, each pathogen can be tested individually upon physician request.

Common individual tests include:

HBV • HCV • HPV • CMV • HSV-1/2 • VZV • EBV • SARS-CoV-2 • Influenza A/B • Parainfluenza • RSV • Adenovirus • E. coli • Klebsiella pneumoniae • Staphylococcus aureus • Listeria monocytogenes • Group B Streptococcus • Chlamydia trachomatis • Neisseria gonorrhoeae • Mycoplasma genitalium • Trichomonas vaginalis • Gardnerella vaginalis • Ureaplasma spp.

Turnaround: typically 24–48 hours depending on test.

Technical Information

Method: Real-Time Multiplex PCR

Advantages:

- Simultaneous detection of multiple pathogens
- High sensitivity and specificity
- Rapid results enabling targeted antimicrobial therapy
- Suitable for all clinical specimens

Why Choose Farabi Medical Laboratory

- Advanced molecular testing technology
- Broadest pathogen coverage in Iraq
- Expert interpretation and physician consultation
- Reliable 24–48 hour turnaround