



# **MALDI-TOF for Nontuberculous Mycobacteria Identification/MDDR Testing.**

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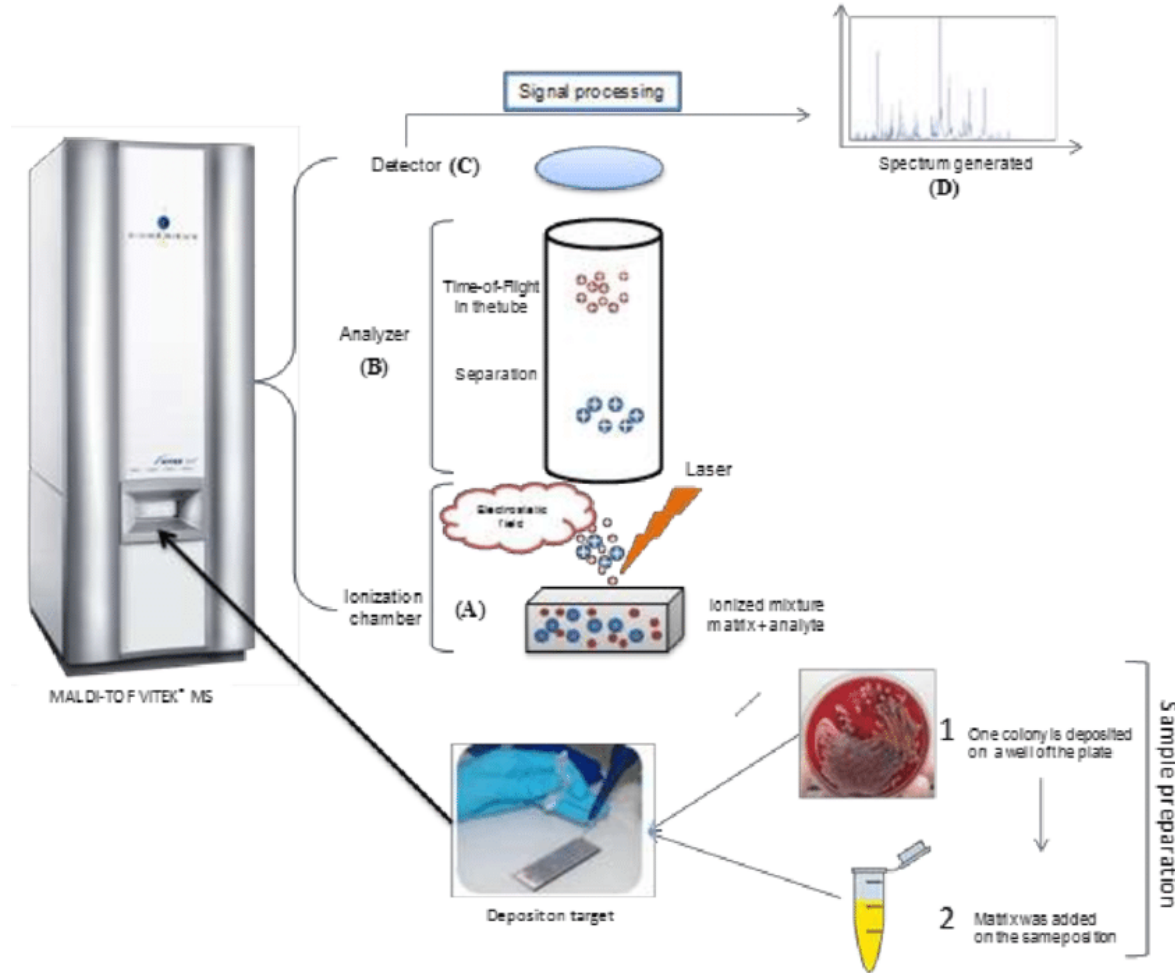
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# What is MALDI-TOF?

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- Matrix-Assisted Laser Desorption/Ionization-Time Of Flight.
- Mass spectrometry technology – proteins are separated by their mass.

# How does it work?



# Workflow:

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- Positive MGIT tube – TB and MAC probes done, 7H11 plate subculture made.
- If TB and MAC negative, MALDI performed from growth on subculture.
- MALDI will provide ID for any organism in its database.
- Identified 50 isolates with 100% accuracy during verification.

# FDA Approved list:

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M. fortuitum group

M. abscessus

M. chelonae

M. mucogenicum

M. gordonae

M. haemophilum

M. immunogenum

M. kansasii

M. lentiflavum

M. malmoense

M. avium

M. intracellulare

M. scrofulaceum

M. simiae

M. smegmatis

M. szulgai

M. tuberculosis complex

M. xenopi

M. marinum

# TB complex still identified by probe.

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- Eliminates delays waiting for 7H11 subculture to grow.
- MALDI unable to speciate the complex.
- All other testing (GeneXpert, DST, etc.) unchanged.

# Significance to you:

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- Streamlined workflow will improve overall lab efficiency.
- Will provide a more definitive answer when NTM infection is suspected.
- Preliminary ID: “ID by Vitek MS MALDI-TOF”.

# MDDR Testing

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# CDC MDDR Testing

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- Targeted DNA sequencing of regions associated with drug resistance.
- Can be performed on any NAAT-positive specimen or TB isolate.
- Results usually take about one week.
- INH and RIF tested, then other drugs if resistance is detected.

# Reasons to request:

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- Previous treatment for active TB or LTBI.
- Confirmation of drug resistance reported by laboratory.
- Spent time in a country with a high rate of drug resistance.
- Contact of a known drug resistant patient.

# Questions?

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