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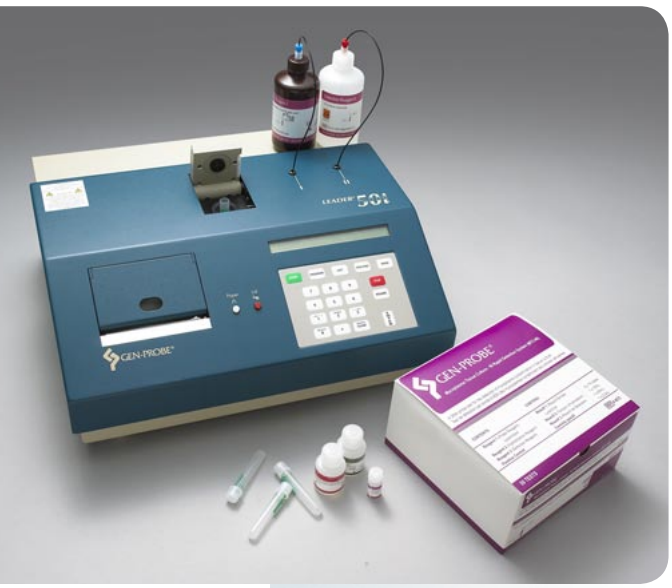
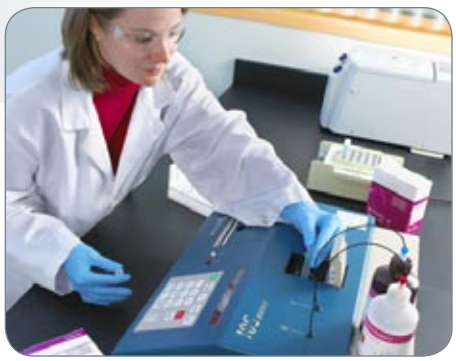


Mycoplasma Tissue Culture Non-Isotopic Rapid Detection

MTC-NI System

An easy-to-use system for the rapid detection of mycoplasma

- Detection and analysis in only 75 minutes including 15 minutes of hands-on time
- Detects commonly occurring Mycoplasma species with a sensitivity of 10^5 microorganisms or higher
- Detection of multicopy rRNA using Gen-Probe Hybridization Protection Assay (HPA) technology to ensure sensitivity and robustness
- Ideal as a first line screening tool for broad spectrum detection of microorganisms
- Easy to use assay requires minimal training



Mycoplasma (e.g microorganisms belonging to class Molicutes) contamination is a widespread and reoccurring problem in a wide variety of cell culture systems. These organisms are small (0.2 – 0.3 µm), lack a cell wall and are antibiotic tolerant. This allows them to grow to high titers without exhibiting typical bacterial contamination signs such as a change in turbidity, which traditional growth based methods can not detect. Current methods for positive detection of species belonging to this genus include plating onto agar and liquid co-cultures with VERO cells followed by DNA staining. Although these technologies yield sensitive and reliable results the time to result is typically 2 – 4 weeks.

MTC-NI Technology

The MTC-NI system utilizes the patented HPA assay format from Gen-Probe in which a labeled (acridinium ester) ssDNA probe, complimentary to a conserved region of the ribosomal RNA, is hybridized to the released rRNA of the target organisms. Upon probe binding to the target RNA, the acridinium esther is protected inside the newly formed double helix. After hybridization is completed (all DNA probes have found their target RNA), a selection reagent (0.6M Sodium borate) is added

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to the solution. The selection reagent hydrolyses unbound probes thus circumventing any signal generation from non-hybridized probes. During detection, the bound probes will produce chemiluminescence (induced by hydrogen peroxide from the detection reagent) that is detected by the Leader instrument. Signal is then presented as Relative Light Units (RLUs) where a positive signal is defined as a value above a certain threshold value.

The main advantages of this technology are the simplicity of the assay both in terms of handling and assay components. Because the MTC-NI HPA assay uses a hybridization event followed by a non-enzymatic hydrolyses and detection, it is very tolerant to sample matrice variation and common inhibitors (Heparin, EDTA etc), which might have a strong negative influence on other common NA detection methods.

MTC-NI Workflow

Sample Preparation

- Centrifuge 1.5 mL tissue culture medium for 10 minutes
- Remove supernatant
- Add hybridization reagent
- Vortex to resuspend

Hybridization

- Transfer sample to probe tube
- Mix gently
- Incubate 45 minutes at 60 °C

Selection/Detection

- Add selection reagent, incubate 10 minutes at 60 °C
- Cool 5 minutes at room temperature
- Read in Leader® instrument

Total Time to Result = 75 minutes

Ordering Information

Description		Qty	Catalogue No.
MTC-NI Kit		50 tests/pk	4573
Probe reagent, 5 x 10 tubes			
Hybridization reagent, 1 x 15 mL			
Selection reagent, 1 x 20 mL			
Positive Control, 1 x 2.5 mL RNA			
Detection Reagent Kit		1200 tests/pk	1791
Detection reagent I, 1 x 240 mL			
Detection reagent II, 1 x 240 mL			
Luminometers			
Leader 50i instrument	115v	1	105194
	220v	1	3100i
Accessories			
Dry Heat Bath		1	2775
Pace Reaction tubes		120 tubes/pk	2065
Leader printer paper		1 roll	1847
Calibration Standard		1	Contact Millipore

To Place an Order or Receive Technical Assistance

For additional information call your nearest Millipore office:
In the U.S. and Canada, call toll-free
1-800-MILLIPORE (1-800-645-5476)
In the U.S., Canada and Puerto Rico, fax orders to
1-800-MILLIFX (1-800-645-5439)
Outside of North America, contact your local office.
To find the office nearest you:
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MTC-NI Mycoplasma Rapid Detection System is manufactured by Gen-Probe Incorporated, San Diego, CA.

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