

- DETECTS THE EIGHT MOST COMMON SPECIES
- RESULTS IN AS LITTLE AS THREE AND A HALF HOURS
- DETECTS AS FEW AS 10 COPIES OF MYCOPLASMA GENOMIC DNA
- AVOIDS FALSE POSITIVES: E.COLI CONTAMINATION IN CLONED TAQ IS NOT DETECTED

NEW

Gel-Based PCR Assay for Fast Mycoplasma Detection

The new **MycoSensor™ PCR assay kit** * detects mycoplasma and acholeplasma infection in cell cultures in three and a half hours, making it the fastest gel-based PCR assay available. The convenient kit allows you to routinely test for the eight most common species of mycoplasma and acholeplasma.

Traditional mycoplasma detection methods, such as culture testing, staining, and immunofluorescence detection, are very time-consuming, insensitive, and difficult to interpret. PCR amplification provides a quick and easy method for mycoplasma detection.

Mycoplasma contamination can interfere with your experiments on many levels. This microorganism can alter eukaryotic cell surface antigens, chromosomal structure, metabolic rates, protein expression patterns, and transfection efficiency. Detection of mycoplasma is therefore critical for the reliability and reproducibility of experimental data.

Mycoplasma Detection in Less Time

Stratagene was the first to develop a gel-based PCR assay for mycoplasma detection. Our new, improved kit, the MycoSensor™ PCR assay kit*, features a reduced cycling time that allows you to detect mycoplasma contamination within three and a half hours, including sample preparation and gel electrophoresis (Figure 1).

The MycoSensor PCR assay kit detects the eight most common species of mycoplasma and acholeplasma (Table 1).

Reduce False-Positives and False-Negatives

The kit includes a primer set, two positive controls, an internal amplification control, a dNTP/dUTP mix, and StrataClean™ resin. Just add your choice of DNA polymerase (we recommend

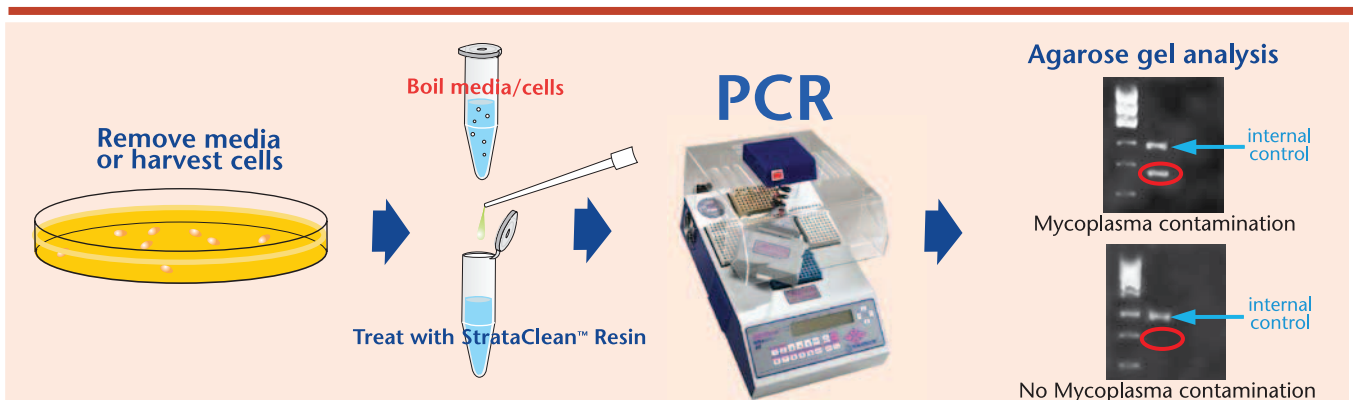


Figure 1
The MycoSensor™ PCR Assay Kit Protocol

Mycoplasma and acholeplasma species	
M. pirum	M. salivarium
M. hominis	A. laidlawii
M. hyorhinis	M. arginini
M. fermentans	M. orale

Table 1
 Detect the Eight Most Common Species
 The MycoSensor™ PCR assay kit detects the eight most common species of mycoplasma and acholeplasma that contaminate cell cultures.

Taq). The kit primers can detect infections from both supernatant and cell extract samples. Cell-growth-inhibiting or weak mycoplasma infections can be detected by testing extracts made directly from cells, from as few as 10 copies of genomic DNA. The primers are designed to prevent the amplification of E.coli gDNA templates that sometimes contaminate recombinant Taq polymerase preparations.

The two positive control templates validate that a polymerase-mediated amplification has occurred and confirm the size of the mycoplasma PCR product in the test samples. If the test cell line is infected, the mycoplasma primer mix yields a single 315-bp amplification product, regardless of which species of mycoplasma is present.

The kit's internal control reduces false-negatives by verifying that your PCR amplification was successful. This template yields a second 500-bp band that is distinguishable from the mycoplasma target band (Figure 2).

The dNTP/dUTP nucleotide mix contains dUTP for dUTP/UNG decontamination treatment with uracil-DNA glycosylase (UDG—not included with kit). This eliminates false-positive results due to carry-over PCR product contamination.

The MycoSensor PCR assay kit provides a fast, convenient method for the routine testing of cell cultures for mycoplasma and acholeplasma contamination. The kit delivers consistent results and includes controls designed to eliminate false-negatives by ensuring that the PCR amplification was successful, and false-positives due to reamplification of the PCR amplicon are prevented when using the UDG decontamination treatment.

Contributing scientists:
 Stratagene: Dwight Dubois, Scott Happe, Marie Luna

* Patent pending
 See license reference 4 on page 102.

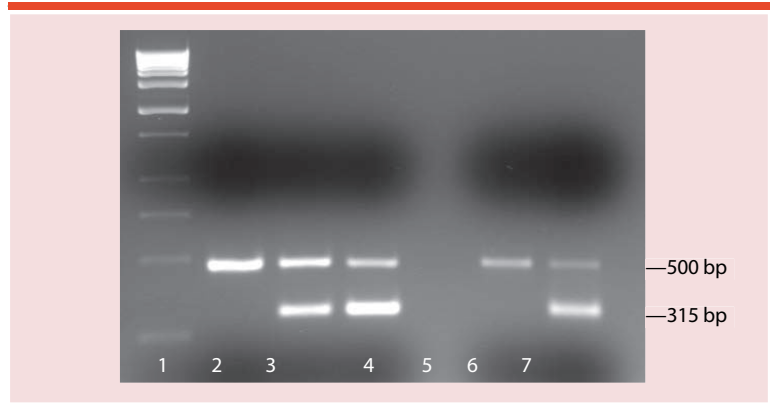


Figure 2
 The MycoSensor PCR Assay Kit Eliminates False-Negatives
 The kit detects the eight most common species of mycoplasma and acholeplasma, which account for >95% of mycoplasma contaminations in cell culture laboratories. While the kit has successfully detected mycoplasma from as few as 10 copies of mycoplasma DNA, typical infections exceed 10⁷ cfu/ml of culture.
 Lane 1: kb ladder
 Lane 2: water + IC (no-template control)
 Lane 3: IC + M. orale (Positive control #1 from the kit)
 Lane 4: IC + A. laidlawii (Positive control #2 from the kit)
 Lane 5: blank
 Lane 6: IC + CHO cell sup (Mycoplasm -)
 Lane 7: IC + HeLa cell sup (Mycoplasm +).



** See inside back cover for more details.

MycoSensor™ PCR Assay Kit	
Contents	Catalog
100 assays	#302108

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