

GMP / ISO 9001 / 14001 / 13485
Certified Company

iNtRON Biotechnology

The New Standard

Mycoplasma Assays Tool

Extraction • Detection • Prevention

FIND iNtRON



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Easy and Fast detection of Mycoplasma Contamination in Cell Culture

Mycoplasma Detection Assay : [Validation part]

The e-Myco™ VALiD PCR kit (Cat. No. 25239) and e-Myco™ VALiD-Q Real-time PCR Kit (ver. 2.0) (Cat. No. 25246) is designed to specifically detect mycoplasma by targeting highly conserved regions of Mycoplasma DNA. Mycoplasmas, the smallest known free living organisms, are relatively common bacterial contaminants of mammalian cell cultures. Regulatory guidance requires that all products derived from mammalian cell culture undergo mycoplasma testing. Mycoplasma detection is difficult, sometimes impossible, when using a traditional culture based test. Regulatory agencies have expanded acceptance of nucleic acid tests, such as PCR & Real-time PCR, as an alternative method to traditional Mycoplasma detection after appropriate validation and regulatory review. (e.g., European Directorate for the Quality of Medicines & Health Care and Ministry of Food and Drug Safety).

ANALYSIS WORKFLOW



Sample Extraction

Manual

G-spin™ Total DNA Extraction Mini Kit (17045/17046)

Auto System

FaSTARprep96 Extraction System (IMC-FAST-P96D)

Miracle-AutoXT Extraction System (IMC-NC15PLUS)



PCR / qPCR Detection

PCR Kit

e-Myco™ VALiD Mycoplasma PCR Detection Kit

Real-time PCR kit

e-Myco™ VALiD-Q Real-time PCR Kit (ver. 2.0)



Analysis

Real-time system

FaSTARamp96 Real-time PCR System (IMC-FAST-A96)



Cell Culture Laboratory

Prevention Spray

Mycoclean™ Mycoplasma Prevention Spray



e-Myco™ VALiD Mycoplasma PCR Detection Kit

- Conventional PCR
- **Convenient** : Easy to use & Premix Type
- MFDS, E.P 2.7.6 guideline compliance
- **Detection limit** : 10 CFU/ml



Cat. No. 25239, Size : 48 Tests

Technical Data

● Sensitivity Test

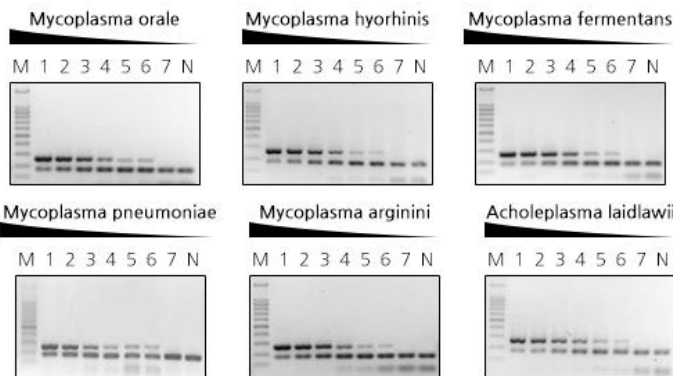


Fig 1. It is possible to detect up to a concentration equivalent to 10 CFU/ml for the 6 types of mycoplasma strains suggested in the negative test guideline, and confirms the sensitivity level to replace the direct method.

Lane M : SiZer™-100 DNA Marker / Lane 1 : 1×10^6 cfu/ml of gDNA / Lane 2 : 1×10^5 cfu/ml of gDNA / Lane 3 : 1×10^4 cfu/ml of gDNA / Lane 4 : 1×10^3 cfu/ml of gDNA / Lane 5 : 1×10^2 cfu/ml of gDNA / Lane 6 : 10 cfu/ml of gDNA / Lane 7 : 1 cfu/ml of gDNA / Lane N : No template control (Water)

● Specificity Test

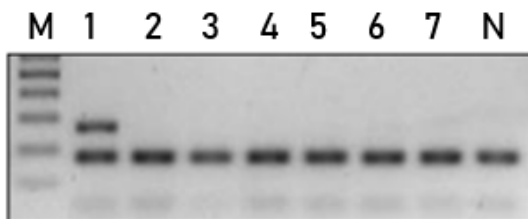
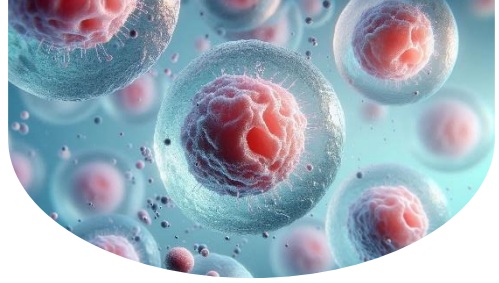


Fig 2. Shows the evaluation data of e-Myco™ VALiD Mycoplasma PCR Detection Kit, suggesting that both internal control (180 bp) and target bands (270 bp) were detected. However, in cases of negative control (20 ng of non-mycoplasma bacterial genomic DNA, lanes 2~7) and no template control (lane N), only negative control band was detected.

Lane M : SiZer™-100 DNA Marker / Lane 1 : *M. hyorhinis* / Lane 2 : *Clostridium perfringens* / Lane 3 : *Streptococcus mutans* / Lane 4 : *Lactobacillus plantarum* / Lane 5 : *Mobiluncus mulieris* / Lane 6 : *Gardnerella vaginalis* / Lane 7 : *Haemophilus ducreyi* / Lane N : No template control (Water)



e-Myco™ VALiD-Q Real-time PCR Kit (ver. 2.0)

- Real-time PCR : Master Mix(Solution) Type
- Prevention of carry-over contamination using UDG
- Fast detection, Less than 1 hour(52 mins)
- Detection limit : 10 CFU/ml, MFDS, E.P 2.7.6 compliance



Cat. No. 25246 / Size : 50 Tests

Technical Data

● Sensitivity Test

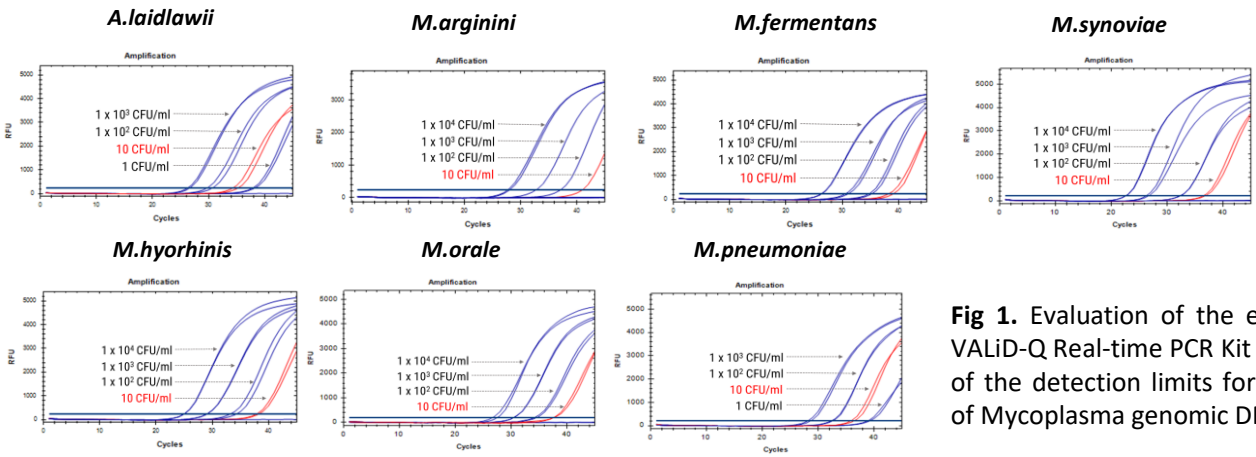


Fig 1. Evaluation of the e-Myco™ VALiD-Q Real-time PCR Kit (ver. 2.0) of the detection limits for 7 types of Mycoplasma genomic DNA.

● Specificity Test

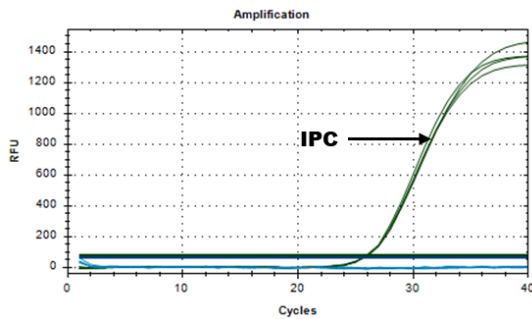


Fig 2. The evaluation of specificity for the genomic DNA of Clostridium, Lactobacillus, and Streptococcus. To evaluate the specificity of the e-Myco™ VALiD-Q Real-time PCR Kit(ver. 2.0), nucleic acids were extracted from related mycoplasma strains: C. perfringens, L. sakei, and S. salivarius, using genomic DNA at a concentration of 10 ng/μL. As a result, negative results were confirmed, and the amplification of the IPC was also observed within the normal range of 22 to 27.

Bacteria	Ct value	
	Target	IPC
<i>E.coli</i>	Negative	24.83
<i>Clostridium perfringens</i>	Negative	24.88
<i>Lactobacillus sakei</i>	Negative	24.99
<i>Sterptococcus salivarius</i>	Negative	24.73



Cat. No. 21084
Size : 200 ml

MycoClean™ Plus Mycoplasma Prevention Spray

- **Ready-to-use** : Convenient and Stable
- Manufactured using **safe** ingredients
- Stored at RT for **2 year**

MycoClean™ Plus Mycoplasma Prevention Spray is specifically formulated to support decontamination of laboratory equipment and surfaces, reducing the risk of Mycoplasma and common bacterial contamination to maintain the integrity of your cell cultures. Effective Mycoplasma control requires the regular decontamination of laboratory equipment, surfaces, and even personnel contact points. MycoClean™ plus Mycoplasma Prevention Spray offers a reliable solution for routine disinfection of critical surfaces such as clean benches, incubators, workstations, storage cabinets, and liquid nitrogen tanks.

Technical Data

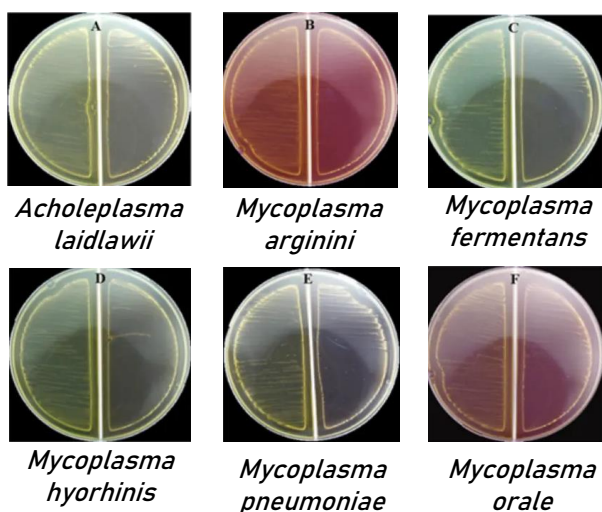


Fig 1. Following incubation, complete inhibition of Mycoplasma growth was observed on the treated side, whereas substantial colony formation occurred on the untreated control side.

Each agar plate shows untreated growth on the left side and the area treated with MycoClean™ plus Mycoplasma Prevention Spray on the right side. Complete inhibition of Mycoplasma growth was observed on the treated side, confirming the potent decontamination capability of MycoClean™ plus Mycoplasma Prevention Spray.

