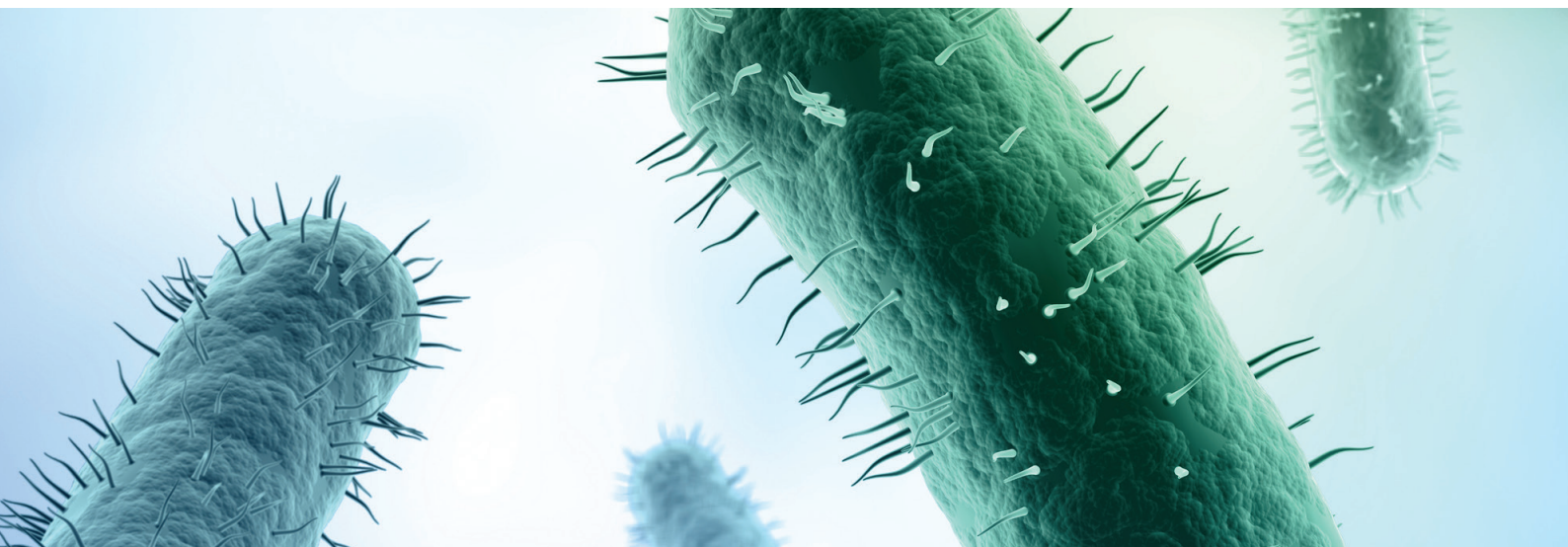


BI
Biological Industries
Culture of Excellence

Mycoplasma Products

Prevention, Detection, and Treatment for all Cell Culture Laboratories



Eliminating Mycoplasma Contamination

One of the most common and elusive contaminants of cell culture laboratories is mycoplasma. Mycoplasmas are pervasive species of highly infectious, parasitic bacteria; their broad range of hosts includes humans and other mammals, birds, reptiles, fish, insects, and plants.¹ Mycoplasma contamination can be transferred directly by aerosols, particulates, and inadequate sterile technique - or indirectly via media, solutions, and laboratory equipment previously used in processing mycoplasma-infected cells. As a result, 15 – 35% of all continuously cultured cell lines test positive for mycoplasma.² Another leading source of contamination is laboratory personnel, explaining the fact that mycoplasma species from human hosts are the most common contaminants – responsible for more than 50% of all infections.³

Mycoplasma contamination can affect biochemical, immunological, and cell signaling behaviors of cells in culture, and contamination can seriously impact the reliability, reproducibility, and consistency of experimental results. A mycoplasma-free cell culture environment is a necessary precondition for safe and pure cell-derived products, as well as for reliable results in scientific experiments.

Biological Industries provides a powerful product portfolio for reliable detection and successful elimination and prevention of mycoplasma contaminations.

Detection

EZ-PCR™ Mycoplasma Detection Kit

For accurate, reliable and universal mycoplasma detection.

Prevention

Pharmacidal™ Prevention Spray

For prevention of contamination and growth of a broad range of fungi, bacteria, mycoplasma and viruses (including HIV and Hepatitis B). Non-toxic, safe for lab equipment, incubators, and work surfaces. **The only preventative solution proven to be suitable for use in pluripotent stem cell culture.**

Aquaguard™ Prevention Solutions

For disinfecting and routine prevention of bacterial and fungal contamination of benchtop and incubator water baths.

Aquaguard-1 is the only preventative water bath solution proven to be suitable for use with sensitive stem cells.

Elimination

BIOMYC™ Treatment Solutions

For the treatment and removal of mycoplasma contamination from infected cell cultures.

Detect, Prevent and Eliminate Mycoplasma Contamination

Using PCR for the Detection of Mycoplasma

The EZ-PCR™ Mycoplasma Detection is a highly-sensitive and specific PCR-based assay designed to detect a broad range of mycoplasma species in cell cultures and other biological materials. The kit contains an optimized complete PCR mix, which includes Mycoplasma-specific primers, dNTP's and Taq polymerase. The kit also includes Internal Control (IC) DNA template as well as positive control DNA template.

With the EZ-PCR™ Mycoplasma Detection Kit's simple protocol and ready-to-use format, samples can be prepared and run in about 10 minutes, with accurate results seen in only a few hours. Routine mycoplasma testing should be carried out minimally every 3 to 6 months, as well as prior to the incorporation of new cultures from outside sources.

Using Antibiotics for the Treatment of Mycoplasma-Infected Cells

BI's BIOMYC™ Antibiotic Solutions are designed to rescue important cell cultures from mycoplasma contamination. Specific combinations of BIOMYC™ Antibiotics are proven to be effective in the elimination of mycoplasma species that account for 90% of the contamination found in cell cultures. When used according to the elimination protocols, no cytotoxic effects, antibiotic resistance, or cellular damage is seen in the treated cultures.

Two methods are recommended for treating contaminated cells with antibiotics. The first is based on sequential treatment of BIOMYC™-1 and BIOMYC™-2 (tiamutin and minocycline), which has shown to be effective in eliminating the mycoplasma species frequently present in contaminated cell cultures.

The second treatment method involves the application of BIOMYC™-3 (ciprofloxacin) independently. Many mycoplasma species have been found to be specifically sensitive to BIOMYC™-3, including *A. laidlawii*, *M. orale*, *M. hyorhinis*, *M. fermentans* and *M. arginini*.

Ordering Information

Cat. #	Product Name	Size
20-700-20	EZ-PCR™ Mycoplasma Detection Kit <small>New-now with Internal Control</small>	20 tests
IC-110100	Pharmacidal™ Spray	1 L
IC-110100-B	Pharmacidal™ Spray	100 mL
IC-110100-L	Pharmacidal™ Spray	250 mL
IC-110100-G	Pharmacidal™ Solution (bulk, refill)	5 L
01-867-1B	Aquaguard™-1 Solution for disinfecting water baths of CO ₂ incubators	100 mL
01-916-1E	Aquaguard™-2 Solution for disinfecting water baths	50 mL
03-036-1	BIOMYC™-1 Antibiotic Solution (100X)	*
03-037-1	BIOMYC™-2 Antibiotic Solution (100X)	*
03-038-1	BIOMYC™-3 Antibiotic Solution (100X)	*

* Available in 10mL, 20mL and 100mL

How to Order

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Prevention of Contamination of Incubators, Surfaces, and Equipment

Pharmacidal™ Prevention Spray

A bacteria prevention spray for incubators and work benches in cell culture and molecular biology labs.

- Non-toxic and biodegradable
- Non-corrosive
- Appropriate for use in pluripotent stem cell culture.
- A technical validation report is available.

Protection against multiple types of contaminants, including:

- Bacteria
- Fungi (including spores)
- Viruses (including HIV and Hepatitis B)
- Mycoplasma

Aquaguard™ Prevention Solutions

Aquaguard™-1 Solution is intended for the treatment and prevention of contamination of water baths within CO₂ incubators.

Aquaguard-1 Solution's antimicrobial and fungicidal properties are effective against a wide range of common lab contaminants, including gram-negative bacteria, yeast, and fungi.

- Highly active
- Non-volatile
- Non-corrosive
- Non-toxic treatment
- Suitable for sensitive stem cells

Aquaguard™-2 Solution is intended for disinfecting and preventing microbial growth in benchtop water baths. Routine application of the 500X Aquaguard™-2 Solution is a practical and efficient means of preventing bacterial and fungal contamination.

References:

1. Razin et al. 1998.
2. Drexler et al. 2002.
3. Nikfarjam et al. 2012.



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