

Research Use Only

Australia

Tel: +61 2.8824.2100
Tel: +61 1800.249.998
Email: custserv.au@mpbio.com

Austria & Germany

Tel: 0800.426.67.337
Tel: 00800.7777.9999
Email: custserv.de@mpbio.com

Belgium

Tel: 00800.7777.9999
Email: custserv.be@mpbio.com

Canada

Tel: +1 800.854.0530
Email: custserv.ca@mpbio.com

China

Tel: +86 400.150.0680
Email: custserv.cn@mpbio.com

Europe

Tel: +33 3.88.67.54.25
Tel: +33 00800.7777.9999
Email: custserv.eur@mpbio.com

France

Tel: +33 3.88.67.54.25
Email: custserv.fr@mpbio.com

India

Tel: +91 22.27636921/22/25
Email: custserv.in@mpbio.com

Italy

Tel: 00800.7777.9999
Email: custserv.it@mpbio.com

Japan

Tel: +81 3.6667.0730
Email: custserv.jp@mpbio.com

Latin America

Tel: +1 800.854.0530
Tel: +1 440.337.1200
Email: custserv.la@mpbio.com

New Zealand

Tel: +64 9.912.2460
Email: custserv.nz@mpbio.com

North America

Tel: +1 800.854.0530
Tel: +1 440.337.1200
Email: custserv.na@mpbio.com

Poland

Tel: 00800.7777.9999
Email: custserv.po@mpbio.com

Russia

Tel: +7 495 604.13.44
Email: custserv.rs@mpbio.com

Serbia

Tel: +381 11.242.1972
Email: custserv.se@mpbio.com

Singapore/ APAC

Tel: +65 6775.0008
Tel: +65 6394.7675
Email: custserv.ap@mpbio.com

South Korea

Tel: +82 2.425.5991
Email: custserv.kr@mpbio.com

Switzerland

Tel: 00800.7777.9999
Email: custserv.ch@mpbio.com

The Netherlands

Tel: 00800.7777.9999
Email: custserv.nl@mpbio.com

United Kingdom

Tel: 0800.282.474
Email: custserv.uk@mpbio.com

Myco-Out Mycoplasma Removal Spray

For effective and safe elimination of mycoplasma with a simple spray

Size: 450 mL and 1.8 L

Storage: 15-25 °C

Cat. No.: 093050853/093050853X4

Content Version: September 2023



Table of Contents

1. Product Introduction.....	1
2. Storage and Stability.....	3
3. Safety Precaution.....	4
4. Protocol	4
5. Order Information	4
6. Related Product Information.....	5
7. Product Use Limitation & Warranty.....	5
8. References.....	5

1. Product Introduction

Mycoplasma is a frequent contaminant of cell cultures. It is the smallest and the simplest prokaryotic organism without cell walls. Therefore, it can pass through 0.22 µm filters easily. Moreover, the common antibiotics which target the cell wall, such as penicillin or β-lactam antibiotics, are ineffective against Mycoplasmas. Mycoplasma contamination can severely affect the state of cells, causing changes in gene expression and metabolic characteristics, decelerated cell growth, abnormal cell differentiation, and cell death. It also severely affects cellular functions ^{1,2,3}.

MP Biomedicals Myco-Out Mycoplasma Removal Spray, is a ready-to-use peptide surfactant, which can quickly, efficiently, and non-toxically eliminate Mycoplasma from working surroundings such as benches, biosafety cabinets, laminar flow cabinets, cell incubators, pipettes, liquid nitrogen tanks, and door handles, etc. It also has a broad-spectrum antimicrobial disinfection effect.

Visit www.mpbio.com to explore additional products to support your research.

Product Features

- **Easy to use.** Traditional methods to prevent and eliminate Mycoplasma from cell culture environment include formaldehyde permanganate fumigation and alcohol wiping, both of which are tedious to operate and have certain toxic side effects on humans and cells. This product is a ready-to-use disinfectant solution, which can be sprayed directly onto the area to be used for rapid removal of Mycoplasma.
- **Fast and non-toxic,** taking approximately 5-10 minutes to remove mycoplasma without any adverse effects on cells. Myco-Out Mycoplasma Removal Spray is a peptide surfactant derived from the fermented extract of *Bacillus subtilis*. It selectively binds to Mycoplasma membrane, altering their permeability and causing them to rupture and die. This product can eliminate Mycoplasma by simply being sprayed onto the surface of objects and left reacting for 5-10 minutes. It only acts on the membrane of Mycoplasma and is impermeable to eukaryotic cells. Therefore, this product has no adverse effects on cells and is non-toxic to humans.

- **High effective.** Please refer to the table below for the efficacy of this product on the removal of Mycoplasma from a laminar flow cabinet coated with the supernatant of Mycoplasma-positive HeLa cell culture. The mycoplasma is removed after treated with Myco-Out Mycoplasma Removal Spray.

Whether treated with Myco-Out Mycoplasma Removal Spray	Cell lines and the ratio detected by Luminescent Mycoplasma detection kit			
	MOLM-13	HCT-116	Jurkat	THP-1
No	+++++	++	+	+++
Yes	-	-	-	-

Mycoplasma positive HeLa cell culture supernatant which was prior diluted 500 times with DMEM culture medium was applied to a very clean bench. Two bench areas were treated simultaneously. After proper ventilation and drying, one of the two bench areas was sprayed with Myco-Out Mycoplasma Removal Spray. After a 5-minute incubation, both areas were wiped with the swabs moistened with culture medium. These swabs were then immersed in culture medium containing mycoplasma-free cell lines like MOLM-13, HCT-116 etc. for rinsing. After rinsing, the cells were then cultured as usual for 48 hours in the medium which was previously washed by the swabs. Subsequently, the cell culture supernatant was collected and subjected to mycoplasma testing with luminescence-based mycoplasma detection kit.

- **Broad antimicrobial spectrum.** It contains components that inactivate bacteria, envelope-free viruses, fungal spores, etc. Therefore, this product not only eliminates Mycoplasma but also effectively removes microorganisms such as Staphylococcus, Escherichia coli, Aspergillus chrysogenes, Pseudomonas aeruginosa, Candida albicans, bovine diarrhea virus, adenovirus, polyomavirus, norovirus, cowpox virus, and fungal spores, etc.
- **Safe to use.** The solvent of this product is ethanol and water, without any mercury, formaldehyde, phenol, or other irritating substances. It is free of corrosive and carcinogenic ingredients, thus will not damage the surface of objects where it is applied to. Moreover, this product is biodegradable, with no residue and no toxicity.

2. Storage and Stability

Store in sealed condition at room temperature, shelf life is 18 months.

3. Safety Precaution

- The Myco-Out Mycoplasma Removal Spray contains ethanol. Ethanol-resistant markers should be used for labeling when this product is used.
- Although Myco-Out Mycoplasma Removal Spray can eliminate mycoplasma completely, recontamination may still occur due to new contaminations from new cells, reagents, and surrounding environments. We recommend using this product regularly and performing mycoplasma detection once a week during cell culture.
- This product should be kept away from ignition sources and stored at room temperature in a ventilated and dry place.
- Avoid direct contact of this product with your eyes. Once contacted, please wash with plenty of water immediately without delay.
- This product is for research use only, not for drug, household, or other uses.
- For your safety and health, please wear a lab coat and disposable gloves during the operation.

4. Protocol

- Spray the Myco-Out Mycoplasma Removal Spray evenly onto the surface of lab equipment or lab area (benches, biosafety cabinets, laminar flow cabinets, cell incubators, pipettes, liquid nitrogen tanks, and door handles, etc.) to be cleaned or disinfected.
- Wait for 5 to 10 minutes.
- Wipe this product off with a clean, dry paper towel.
- Ventilate for 2-3 minutes and then the cleaned equipment or lab area can be used.

Notes:

- √ It is recommended to treat cell incubators with this product once every 2-4 weeks, the laminar flow cabinets or biosafety cabinets for every 2-3 days, daily or before each use, as deemed appropriate.
- √ For cell incubators, after the interior has been sprayed with Myco-Out Mycoplasma Removal Spray and wiped clean, the door should be kept open to ventilate for at least 1 hour. If the incubator is equipped with the heat inactivation function, this function can be turned on as an alternative to air-drying.

5. Order Information

Cat. No.	Product Name	Pack Size
093050853	Myco-Out Mycoplasma Removal Spray	450 mL
093050853X4	Myco-Out Mycoplasma Removal Spray (For refill, without spray bottle)	1.8 L (450 mL x 4)

6. Related Product Information

Cat. No.	Product Name	Pack Size
093050601	Myco-Visible Mycoplasma LAMP Detection Kit	40 Tests
093050201	Myco-Sniff™ Mycoplasma PCR Detection	48 Tests
093050301	KitMyco-SniffValid™ Mycoplasma PCR Detection Kit	48 Tests
093050401	Myco-SniffRapid™ Mycoplasma Luciferase Detection Kit	25 Tests
093050402		50 Tests
093050044	Mycoplasma Removal Agent	5 mL

7. Product Use Limitation & Warranty

The products presented in this instruction manual are for research or manufacturing use only. They are not to be used as drugs or medical devices in order to diagnose, cure, mitigate, treat or prevent diseases in humans or animals, either as part of an accepted course of therapy or in experimental clinical investigation. These products are not to be used as food, food additives or general household items. Purchase of MP Biomedicals products does not grant rights to reproduce, modify, or repackage the products or any derivative thereof to third parties. MP Biomedicals makes no warranty of any kind, expressed or implied, including merchantability or fitness for any particular purpose, except that the products sold will meet our specifications at the time of delivery.

Buyer's exclusive remedy and the sole liability of MP Biomedicals hereunder shall be limited to, at our discretion, no replacement or compensation, product credits, refund of the purchase price of, or the replacement of materials that do not meet our specification. By acceptance of the product, Buyer indemnifies and holds MP Biomedicals harmless against, and assumes all liability for, the consequence of its use or misuse by the Buyer, its employees, or others, including, but not limited to, the cost of handling. Said refund or replacement is conditioned on Buyer notifying within thirty (30) days of receipt of product. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by the Buyer of all claims hereunder with respect to said material(s).

8. References

1. Citti C, Blanchard A. Trends Microbiol. 2013. 21(4):196-203.
2. Folmsbee M, Howard G, McAlister M. Biologicals. 2010. 38(2):214-7.
3. Sinkovics JG. Int J Oncol. 2012. 40(2):305-4