

ListShield™ (LMP-102™)***Listeria Monocytogenes* Specific Phage Preparation****Section 1. Identification**

Product Name:	<i>ListShield™</i> (LMP-102™)
Catalog Number:	01LP
Manufacturer:	Intralytix, Inc. Columbus Center 701 E. Pratt St. Baltimore, MD 21202
Recommend use:	Phage preparation effective against <i>Listeria monocytogenes</i>
For More Information Call:	1-877-ITX-PHAGE Monday–Friday 9:00 AM – 5:00 PM

Section 2. Hazards Identification

Physical State and Appearance: Clear, colorless to pale-amber liquid.

Emergency Overview:

Potential Health Effects from:

Inhalation:	Inhalation is unlikely to cause injury; excessive amounts of vapor or mist may cause mild irritation in the nose and/or throat.
Skin Contact:	Contact is unlikely to cause injury.
Eye Contact:	Contact is unlikely to cause injury; excessive amounts of contact may cause mild irritation.
Ingestion:	Ingestion is unlikely to cause injury.
Routes of Entry:	Ingestion. Inhalation during spray operations.

Section 3. Composition/ Information on Ingredients

Component % by weight *Listeria monocytogenes* – specific phages < 0.00001
100mM Sodium chloride solution > 99.9

CAS Number: Not applicable.

Because phages are not hazardous chemicals, the information provided in the MSDS is primarily for the buffer carrier of ListShield™, 100mM sodium chloride.

Section 4: First-Aid Measures

Eye Contact:	Flush with water for 15 minutes.
Skin Contact:	Wash with soap and water.
Inhalation:	Wear a mask or respirator when using product as an aerosol. If exposed to excessive levels of vapors or mists, remove to fresh air.
Ingestion:	If swallowed in excess, wash out mouth with water.
Symptoms:	None determined.

Section 5. Fire Fighting Measures

Flammability of the Product:	Non-flammable.
Auto-ignition:	Not applicable.
Flash Points:	Not applicable.
Flammable Limits:	Not applicable.
Fire Fighting Instructions:	Not applicable.
Protective Clothing (Fire):	Not applicable.

Section 6. Accidental Release Measures

Small Spill and Leak:	Absorb with an inert material and put the spilled material in an appropriate waste disposal container.
Large Spill and Leak:	Mop up or absorb with an inert dry material and place in an appropriate waste disposal container.
Spill Kit Information:	No specific spill kit is required for this product.

Section 7. Handling and Storage

Handling:	Keep container closed when not in use.
Storage:	Keep container in a cool (2–8°C), dark, UV-protected area. Carefully read and follow all label directions.

Section 8. Exposure Controls/Personal Protection

Engineering Controls:	When using as an aerosol, provide exhaust ventilation to minimize airborne concentrations of vapors.
Personal Protection	
Eyes:	When using as an aerosol, don chemical goggles and provide access to eye/face flushing equipment.
Body:	A lab coat may be worn when handling this solution.
Respiratory:	When airborne exposure limits are exceeded or ventilation is inadequate, use appropriate NIOSH approved respiratory protection equipment. Respiratory protection programs are subject to 29 CFR § 1910.134.

Hands: Gloves may be worn when handling this solution. Please refer to glove manufacturer for recommendations.

Feet: Closed-toe shoes of non-porous material with adequate metatarsal coverage should be worn when handling this solution.

Component Exposure Limits

Bacteriophage No OSHA Vacated PELs are listed for this component.
Saline solution, 100mM No OSHA Vacated PELs are listed for this component.

Section 9. Physical and Chemical Properties

Odor: Odorless.
Color: Clear/opalescent.
Physical State and Appearance: Liquid.
Molecular Weight: Not applicable.
Molecular Formula: Not applicable.
pH: 6.5 – 7.5
Boiling/Condensation Point: The lowest known value is 99.9°C (211.8°F) (WATER).
Melting/Freezing Point: May start to solidify at –0.1°C (31.8°F) based on data for WATER.
Vapor Pressure: Not available.
Vapor Density (vs. air): Not available.
Density (vs. water): 1.005–1.007 g/cm³
Decomposition Temperature: Not available.
Evaporation Rate: (0.36 (WATER) compared to (n-BUTYL ACETATE=1)
Solubility: Soluble in Water.
Viscosity: Not available.

Section 10. Stability and Reactivity

Stability and Reactivity: Stable when used appropriately.
Conditions of Instability: Not available.
Incompatibility with Various Substances: Not available.
Rem/Incompatibility: Not available.
Hazardous Decomposition Products: Not available.
Hazardous Polymerization: Will not occur.

Section 11. Toxicological Information

Toxicity: Acute oral toxicity (LD50): >90 mL/kg [Rat] (Saline).
Acute toxicity of the vapor (LC50): > 42 g/m³/1hr [Rat] (Saline).
Chronic Effects on Humans: None
Acute Effects on Humans: None

Irritancy:	Draize Test: Rabbit, eye – 100 mg Mild (Saline); Rabbit, skin – 50mg/24hr Mild
Sensitization:	Not available.
Carcinogenic Effects:	This material is not known to cause cancer in animals or humans (Saline).
Toxicity to Reproductive System:	Not available.
Teratogenic Effects:	Not available.
Mutagenic Effects:	Not available.

Section 12. Ecological Information

Ecotoxicity:	Not toxic.
BOD5 and COD:	Not available.
Toxicity of the Products of Biodegradation:	The product itself and its products of degradation are not toxic.

Section 13. Disposal Considerations

EPA Waste Number:	Not available.
Treatment:	Material does not have an EPA Waste Number and is not a listed waste, however, always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

Section 14. Transportation Information

Transport Hazard Classification:	Not Hazardous
DOT Classification:	Not applicable.
TDG Classification:	Not available.
IMO/IMDG Classification:	Not applicable.
ICAO/IATA Classification:	Not applicable.

Section 15. Regulatory Information

U.S. Federal Regulations:	Components of this product are not listed on the TSCA Inventory or TSCA Inventory status cannot be confirmed.
CERCLA and SARA Regulations (40 CFR 355, 370, 372):	This product does not contain any chemicals subject to reporting requirements of SARA Section 313.
State Regulations:	Pennsylvania RTK: Not applicable Massachusetts RTK: Not applicable New Jersey: Not applicable

Illinois:	Not applicable
Michigan:	Not applicable
Minnesota:	Not applicable
Louisiana:	Not applicable
California prop. 65:	Not applicable.

Section 16. Other Information

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