



## MATERIAL SAFETY DATA SHEET

**ListShield™ (LMP-102™)**

### *ListShield™ (LMP-102™) Listeria monocytogenes* Specific Phage Preparation

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#### Section 1. Product and Company Identification

Product Name: *ListShield™*  
(LMP-102™)  
(Phage preparation effective against *Listeria monocytogenes*)

Catalog Number: 01LP

Manufacturer: Intralytix, Inc.  
Columbus Center  
701 E. Pratt St.  
Baltimore, MD 21202

For More Information Call: 1-877-ITX-PHAGE  
Monday–Friday 9:00 AM – 5:00 PM

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#### Section 2. Composition and Information on Ingredients

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

CAS Number: Not applicable.

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#### Section 3. 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.

Ingestion: Ingestion is unlikely to cause injury.

Routes of Entry: Ingestion. Inhalation during spray operations.

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**Section 4. First Aid Measures**

Eye Contact:	Flush with plenty of water.
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.

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**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.

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**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.

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**Section 7. Handling and Storage**

Handling:	Keep container closed when not in use.
Storage:	Keep container in a cool (2–6°C), dark, UV-protected area. Carefully read and follow all label directions.

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**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.

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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.

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**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/cm<sup>3</sup>  
Decomposition Temperature: Not available.  
Evaporation Rate: (0.36 (WATER) compared to (n-BUTYL ACETATE=1)  
Solubility: Soluble in Water.  
Viscosity: Not available.

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**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.

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**Section 11. Toxicological Information**

Toxicity: Acute oral toxicity (LD50): >90 mL/kg [Rat] (Saline).  
Acute toxicity of the vapor (LC50): > 42 g/m<sup>3</sup>/1hr [Rat] (Saline).  
Chronic Effects on Humans: None



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Acute Effects on Humans:	None
Irritancy:	Draize Test (Saline): 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.

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### 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.

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### 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 consultation with a permitted waste disposal site (TSD) should be accomplished. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

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### Section 14. Transportation Information

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

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### Section 15. Regulatory Information

U.S. Federal Regulations:	This product is intended solely for use as a food additive in accordance with 21CFR172.785. 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.



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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.

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### Section 16. Other Information

#### Notice to Reader

The statements contained herein are based upon technical data that Intralaytix, Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

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