

## ***EcoShield™ (ECP-100™) Escherichia coli Specific Phage Preparation***

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### **Section 1. Product and Company Identification**

Product Name: EcoShield™  
(ECP-100™)  
(Phage preparation effective against *Escherichia coli* O157:H7)

Catalog Number: ECP100

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

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

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

Component % by weight *Escherichia coli* – specific phages < 0.00001  
Phosphate Buffered Saline > 99.9

CAS Number: Not applicable.

Active ingredient of EcoShield is a mixture of naturally occurring bacteriophages. Bacteriophages (also called phages) are the most ubiquitous microorganisms on earth. They have the ability to specifically kill their targeted bacteria (in the case of EcoShield™, *E. coli* O157:H7) without affecting other, and often beneficial, bacteria. The abundance of phages in the environment, and the continuous exposure of humans to them, explains the extremely good tolerance of the human organism to phages. Because phages are not hazardous chemicals, the information provided in the MSDS is primarily for the buffer carrier of EcoShield™, Phosphate Buffered Saline (PBS).

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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.

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Skin Contact:	Contact is unlikely to cause injury, but may cause mild redness or irritation.
Eye Contact:	Contact is unlikely to cause injury, but may cause mild redness or irritation.
Ingestion:	Ingestion is unlikely to cause injury, but may cause mild stomach ache or distress.
Routes of Entry:	Ingestion. Inhalation.

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**Section 4. First Aid Measures**

Eye Contact:	Flush with plenty of water. Get medical attention if irritation develops or persists.
Skin Contact:	Wash with soap and water. Remove contaminated clothes and wash before reusing. Seek medical attention if irritation develops or persists.
Inhalation:	If exposed to excessive levels of vapors or mists, remove to fresh air and get medical attention if cough or other symptoms develop.
Ingestion:	If swallowed, wash out mouth with water. Seek medical attention if symptoms appear.

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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.
Special Remarks on Fire Hazards:	Not applicable.
Special Remarks on Explosion Hazards:	Not applicable.

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**Section 6. Accidental Release Measures**

Small Spill and Leak:	Mop up or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill and Leak:	Absorb with an inert material and put the spilled material in an appropriate waste disposal container.

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Spill Kit Information: No specific spill kit is required for this product.

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### Section 7. Handling and Storage

Handling: Avoid contact with eyes, skin or clothing. Keep container closed.

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: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

#### Personal Protection

Eyes: Where necessary, use a face shield, chemical goggles and provide access to eye/face flushing equipment.

Body: Lab coat.

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 known occupational exposure limits for this component.

PBS (Phosphate Buffered Saline) No known occupational exposure limits 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: 7.2 – 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.

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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 (LD<sub>50</sub>): 3,000 mg/kg [Rat] (Phosphate Buffered Saline).  
Acute toxicity of the vapor (LC<sub>50</sub>): > 42,000 mg/m<sup>3</sup> 1 hour(s) [Rat] (Phosphate Buffered Saline).  
Chronic Effects on Humans: None  
Acute Effects on Humans: None  
Irritancy: Draize Test: Not a skin irritant (Phosphate Buffered Saline).  
Sensitization: Not available.  
Carcinogenic Effects: This material is not known to cause cancer in animals or humans (Phosphate Buffered 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.  
BOD<sub>5</sub> 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.

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.

Date document prepared: February 16, 2011

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**Section 16. Other Information**

Notice to Reader

The statements contained herein are based upon technical data that Intralytix, Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency



## **MATERIAL SAFETY DATA SHEET**

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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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