



# MATERIAL SAFETY DATA SHEET

Revision Number A95018D  
3/30/09

## 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY / UNDERTAKING

**Product name** YSI 2747 Dual Standard (D-Glucose 1.80g/L +/- 0.01g/L, L-Lactate 0.45g/L +/- 0.01g/L)  
**Synonyms** None  
**Chemical characterization** Dilute aqueous solution of the listed ingredients  
**Manufacturer, importer, supplier** YSI, Inc  
1700/1725 Brannum Lane  
Yellow Springs, OH 45387  
**EMERGENCY TELEPHONE NUMBER** 1- 937- 767- 7241

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% Weight	ACGIH TWA	IARC*	NTP*	OSHA*
7732-18-5	Water	>96	None	N/A	N/A	N/A
50-99-7	Glucose	<1		N/A	N/A	N/A
532-32-1	Sodium benzoate	<1		N/A	N/A	N/A
27848-80-2	Lithium (S) Lactate	<1		N/A	N/A	N/A
25102-12—9	Glycine, N,N'-1,2-ethanediybis(N-carboxymethyl) dipotassium salt, dihydrate	<1		N/A	N/A	N/A

\* IARC - Group 1 (Carcinogenic to humans)

\* NTP - Report on Carcinogens - Known Carcinogens

\* OSHA - Regulated Carcinogens

## 3. HAZARDS IDENTIFICATION

### Emergency Overview

This product contains no substances which at their given concentration, are considered to be hazardous to health.

<b>Eye Contact</b>	<ul style="list-style-type: none"><li>May cause severe irritation</li></ul>
<b>Skin Contact</b>	<ul style="list-style-type: none"><li>Exposure may cause skin irritation</li></ul>
<b>Inhalation</b>	<ul style="list-style-type: none"><li>Depending on the length of exposure and temperature of liquid, possible mild irritation from vapors if inhaled.</li></ul>
<b>Ingestion</b>	<ul style="list-style-type: none"><li>No effects expected from normal use and minor amounts ingested. Ingestion of large amounts, a cup full or more, can cause digestive system upset.</li></ul>
<b>General Advice</b>	<ul style="list-style-type: none"><li>As with any chemical, use caution when handling</li><li>If exposure effects persist seek medical attention</li></ul>
<b>Principle Routes of Exposure</b>	<ul style="list-style-type: none"><li>Eyes, absorption, ingestion</li></ul>

## 4. FIRST AID MEASURES

<b>General Advice</b>	<ul style="list-style-type: none"><li>If exposure symptoms persist, seek medical attention.</li></ul>
<b>Skin Contact</b>	<ul style="list-style-type: none"><li>Wash exposed areas with soap and water for 15 minutes</li></ul>
<b>Eye Contact</b>	<ul style="list-style-type: none"><li>Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes</li></ul>
<b>Inhalation</b>	<ul style="list-style-type: none"><li>Move to fresh air in case of accidental inhalation</li></ul>
<b>Ingestion</b>	<ul style="list-style-type: none"><li>For ingestion of large amounts induce vomiting if person is conscious. If conditions persist, seek medical attention.</li></ul>

<b>Notes to Physician</b>	<ul style="list-style-type: none"> <li>• Treat symptomatically</li> </ul>
<b>Protection of First-Aiders</b>	<ul style="list-style-type: none"> <li>• Use necessary personal protective equipment</li> </ul>
<b>Aggravated Medical Conditions</b>	<ul style="list-style-type: none"> <li>• Users with skin conditions (eczema, psoriasis, etc), respiratory conditions (asthma, bronchitis, emphysema, etc), or with chemical sensitivities should take protective precautions</li> </ul>

## 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Suitable Extinguishing Media</b>	<ul style="list-style-type: none"> <li>• Not applicable to this product</li> </ul>
<b>Extinguishing media which must not be used for safety reasons</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>

### Specific Hazards

<b>Special exposure hazards rising from the substance or preparation itself, its combustion products, or released gases</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Special protective equipment for firefighters</b>	<ul style="list-style-type: none"> <li>• None</li> <li>• As in any fire, wear self-contained breathing apparatus, and full protective gear</li> </ul>

### Specific Methods

<b>NFPA (National Fire Protection Association)</b>	Health=1 (slight)	Reactivity=0	Fire=0	Special=0 (none)
<b>HMIS (Hazardous Material Information System)</b>	Health=1 (slight)	Reactivity=0	Fire=0	Special=0 (none)

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	<ul style="list-style-type: none"> <li>• Ensure adequate ventilation</li> <li>• Use necessary personal protective equipment</li> </ul>
<b>Environmental precautions</b>	<ul style="list-style-type: none"> <li>• No information available</li> </ul>
<b>Methods for cleaning up</b>	<ul style="list-style-type: none"> <li>• Soak up with inert absorbent</li> <li>• After cleaning, flush away traces with water</li> </ul>

## 7. HANDLING AND STORAGE

<b>Technical Measures / Precautions</b>	<ul style="list-style-type: none"> <li>• Avoid contact with skin, eyes, and clothing</li> </ul>
<b>Safe Handling Advice</b>	<ul style="list-style-type: none"> <li>• Wash hands immediately after contact to avoid hand-eye transfer</li> <li>• Wear personal protective equipment</li> </ul>

### Storage

<b>Technical Measures / Precautions</b>	<ul style="list-style-type: none"> <li>• Store in properly labeled containers</li> <li>• Keep containers tightly closed. Discard any material that may be contaminated or, which may have changed composition.</li> </ul>
<b>Incompatible Products</b>	<ul style="list-style-type: none"> <li>• No information available</li> </ul>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering measures</b>	<ul style="list-style-type: none"> <li>• Ensure adequate ventilation, especially in confined areas</li> <li>• Ensure eyewash station is readily available</li> </ul>
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### Personal protective equipment

<b>Hand Protection</b>	<ul style="list-style-type: none"> <li>• Wear the appropriate protective gloves</li> </ul>
<b>Eye protection</b>	<ul style="list-style-type: none"> <li>• Wear tightly fitting safety goggles or safety glasses with side-shields</li> <li>• Face-shield</li> </ul>
<b>Respiratory Protection</b>	<ul style="list-style-type: none"> <li>• Ensure adequate ventilation is available before handling any chemical</li> </ul>

	<ul style="list-style-type: none"> <li>In case of insufficient ventilation, wear suitable respiratory equipment</li> </ul>	
<b>Skin and Body Protection</b>	<ul style="list-style-type: none"> <li>Long sleeved clothing</li> <li>Boots</li> <li>apron</li> </ul>	
<b>Hygiene measures</b>	<ul style="list-style-type: none"> <li>Handle in accordance with good industrial hygiene and safety practice</li> <li>Keep away from food, drink, and animal feeding stuffs</li> </ul>	
<b>Environmental exposure controls</b>	<ul style="list-style-type: none"> <li>No information available</li> </ul>	

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### General Information

<b>Form</b>	Liquid
<b>Appearance</b>	Clear colorless liquid
<b>Odor</b>	None

### Important Health Safety and Environmental Information

<b>pH</b>	6.5 to 7.5
<b>Boiling Point / Range</b>	100°C
<b>Flash Point</b>	None
<b>Vapor Pressure</b>	Equivalent to water
<b>Vapor Density</b>	= water vapor
<b>Water Solubility</b>	Infinitely soluble
<b>Specific Gravity</b>	1.00

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	<ul style="list-style-type: none"> <li>Stable under normal conditions</li> </ul>
<b>Materials to Avoid</b>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Hazardous Decomposition Products</b>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Polymerization</b>	<ul style="list-style-type: none"> <li>Polymerization does not occur</li> </ul>

## 11. TOXICOLOGICAL INFORMATION

### Local Effects

<b>Skin Irritation</b>	<ul style="list-style-type: none"> <li>May cause skin irritation in susceptible persons.</li> </ul>
<b>Eye Irritation</b>	<ul style="list-style-type: none"> <li>Can cause severe irritation</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>May cause irritation in nasal passages</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>No effects expected from normal use. Ingestion of this product may cause digestive system upset</li> </ul>
<b>Sensitization</b>	<ul style="list-style-type: none"> <li>No information available</li> </ul>
<b>Chronic Toxicity</b>	<ul style="list-style-type: none"> <li>No information available</li> </ul>

### Specific Effects

<b>Carcinogenic Effects</b>	<ul style="list-style-type: none"> <li>No information available</li> </ul>
<b>Mutagenic Effects</b>	<ul style="list-style-type: none"> <li>No information available</li> </ul>
<b>Reproductive Toxicity</b>	<ul style="list-style-type: none"> <li>No information available</li> </ul>
<b>Target Organ Effects</b>	<ul style="list-style-type: none"> <li>No information available</li> </ul>

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity Effects

### Product Information

<b>Aquatic Toxicity</b>	<ul style="list-style-type: none"> <li>No information available.</li> </ul>
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## Other Information

<b>Ozone Depletion Potential; ODP; (R-11=1)</b>	<ul style="list-style-type: none"><li>No information available.</li></ul>
<b>Global Warming Potential (GWP)</b>	<ul style="list-style-type: none"><li>No information available.</li></ul>
<b>Additional Ecological Information</b>	<ul style="list-style-type: none"><li>No information available.</li></ul>
<b>Mobility</b>	<ul style="list-style-type: none"><li>No information available.</li></ul>
<b>Bioaccumulative Potential</b>	<ul style="list-style-type: none"><li>No information available.</li></ul>
<b>Ecotoxicity Effects</b>	<ul style="list-style-type: none"><li>No information available.</li></ul>
<b>Aquatic Toxicity</b>	<ul style="list-style-type: none"><li>No information available.</li></ul>

## 13. DISPOSAL CONSIDERATIONS

<b>Waste From Residues / Unused Products</b>	<ul style="list-style-type: none"><li>Dispose of in accordance with local regulations</li></ul>
<b>Contaminated Packaging</b>	<ul style="list-style-type: none"><li>Empty containers should be rinsed and disposed of as appropriate for glass and plastic containers</li></ul>

## 14. TRANSPORT INFORMATION

DOT Not regulated  
UN-No  
Proper shipping name  
Packing group  
Subsidiary Risk  
Description

## 15. REGULATORY INFORMATION

### U.S. Inventories

CAS	Chemical Name	% Weight	ACGIH TWA
7732-18-5	Water	>96	None
50-99-7	Glucose	<1	N/A
532-32-1	Sodium benzoate	<1	N/A
27848-80-2	Lithium (S) Lactate	<1	N/A
25102-12—9	Glycine, N,N'-1,2-ethanediylbis(N-carboxymethyl) dipotassium salt, dihydrate	<1	

\* ACGIH - Occupational Exposure Limits - TWA's

### International Inventories

CAS	Chemical Name	% Weight	EUOED - EU
7732-18-5	Water	>96	None
50-99-7	Glucose	<1	N/A
532-32-1	Sodium benzoate	<1	N/A
27848-80-2	Lithium (S) Lactate	<1	N/A
25102-12—9	Glycine, N,N'-1,2-ethanediylbis(N-carboxymethyl) dipotassium salt, dihydrate	<1	N/A

\* EUOED - EU Occupational Exposure Directive (98/24/EC) Indicative Occupational Exposure Limit Values (IOELV)

## 16. OTHER INFORMATION

Literary Reference None.  
Prepared By YSI, Inc.  
End of Safety Data Sheet.