

# Material Safety Data Sheet (MSDS)

Revision Number: 1.0		Last updated: January, 2013	
<b>1. Product and Company Identification</b>			
Product Name:		SensoLyte® Rh110 Enterokinase Activity Assay Kit * Fluorimetric*	
Manufacturer/Supplier:		AnaSpec, Inc. <a href="http://www.anaspec.com">www.anaspec.com</a> 34801 Campus Drive Fremont, CA 94555 Tel: 510-791-9560 Fax: 510-791-9572 Email: <a href="mailto:service@anaspec.com">service@anaspec.com</a>	
Catalog Number		72210	
Unit Size		1 kit	
<b>2. Hazards Identification</b>			
<u>Emergency Overview:</u>			
GHS Hazard Classification:			
GHS Physical Hazards			
Component A: Flammable liquid (Category 4)			
Component B: Flammable liquid (Category 4)			
Component C: Not Applicable			
Component D: Not Applicable			
Component E: Flammable liquid (Category 4)			
GHS Health and Environmental Hazards			
Component A: Irritant to eyes and skin			
Component B: Irritant to eyes and skin			
Component C: Irritant to eyes and skin			
Component D: Irritants to eyes and skin			
Component E: Irritants to eyes and skin			
GHS Signal Words:			
Component A: Warning			
Component B: Warning			
Component C: Danger			
Component D: Danger			
Component E: Warning			
GHS Hazard Statements:			
Component A: H227 Combustible liquid			
Component B: H227 Combustible liquid			
Component C: H302 Harmful if swallowed.			

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Component D: H302 Harmful if swallowed.  
 H314 Causes severe skin burns and eye damage.  
 H335 May cause respiratory irritation.

Component E: H227 Combustible liquid

*GHS Precautionary Statements:*

Component A: - None  
 Component B: - None  
 Component C: - None  
 Component D: -None  
 Component E: -None

*HMIS Classification:*

Component A:	Component B:	Component C:	Component D:	Component E:	
Health hazard: 0	Health hazard: 0	Health hazard: 0	Health hazard: 0	Health hazard: 0	
Flammability: 2	Flammability: 2	Flammability: 0	Flammability: 0	Flammability: 2	
Physical hazards: 0	Physical hazards: 0	Physical hazards: 0	Physical hazards: 0	Physical hazards: 0	

*NFPA Rating:*

Component A:	Component B:	Component C:	Component D:	Component E:		
Health hazard: 0	Health hazard: 0	Health hazard: 0	Health hazard: 2	Health hazard: 0		
Fire: 2	Fire: 2	Fire: 0	Fire: 0	Fire: 2		
Reactivity hazard: 0	Reactivity hazard: 0	Reactivity hazard: 0	Reactivity hazard: 0	Reactivity hazard: 0		

**3. Composition / Information on Ingredients**

*Ingredients/Components:*

Chemical Name:	Description	CAS Number:
Component A	Contains DMSO	67-68-5
Component B	Contains DMSO	67-68-5
Component C	Solution	N/A
Component D	Solution	N/A
Component E	Contains DMSO	67-68-5

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**4. First Aid Measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**Component A**

*Inhalation:* If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

*Ingestion:* Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

*Skin:* Wash off with soap and plenty of water. Consult a physician.

*Eyes:* Flush eyes with water as a precaution.

**Component B**

*Inhalation:* If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

*Ingestion:* Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

*Skin:* Wash off with soap and plenty of water. Consult a physician.

*Eyes:* Flush eyes with water as a precaution.

**Component C**

*Inhalation:* If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

*Ingestion:* Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

*Skin:* Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

*Eyes:* Flush eyes with water as a precaution.

**Component D**

*Inhalation:* If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

*Ingestion:* Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

*Skin:* Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

*Eyes:* Flush eyes with water as a precaution.

**Component E**

*Inhalation:* If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

*Ingestion:* Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

*Skin:* Wash off with soap and plenty of water. Consult a physician.

*Eyes:* Flush eyes with water as a precaution.

**5. Fire Fighting Measures****AnaSpec Inc.**

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<i>Extinguishing media:</i>	<p>Component A, B, and E: For small fires, use alcohol resistant foam, dry chemical, or carbon dioxide. For large fires, use water spray from a safe distance.</p> <p><b>Component C, D:</b> Not applicable.</p>
<i>Special firefighting procedures:</i>	<p><b>Component A, B, and E:</b> Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.</p> <p><b>Component C, D:</b> Not applicable.</p>
<i>Unusual fire and explosions hazards:</i>	<p><b>Component A, B, E:</b> Combustible liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Hazardous carbon oxides and sulphur oxides formed under fire conditions.</p> <p><b>Component C, and D:</b> Not applicable.</p>

#### **6. Accidental Release Measures**

<i>Containment and spill response</i>	<p><b>Component A, B, and E:</b> Immediately contact emergency personnel. Prevent further leakage or spillage if safe to do so. Avoid breathing vapors or mist. Remove all sources of ignition and provide ventilation. Collect with an electrically protected vacuum cleaner, by wet-brushing, or by absorbing with vermiculite, sand or earth, and place in appropriate container for disposal. Do not let material enter drains.</p> <p><b>Component C, and D:</b> Not applicable.</p>
<i>PPE</i>	Use personal protective equipment

#### **7. Handling and Storage**

<p><b>Component A, B, and E</b></p> <p><i>Handling:</i> Wash thoroughly after handling. Remove and wash any contaminated clothing. Keep container tightly closed and avoid contact with eyes, skin, and clothing. Use with adequate ventilation and avoid ingestion and inhalation. Keep away from heat and flame.</p> <p><i>Storage:</i> Store in a tightly closed container away from moisture, heat, and flame. Store away from incompatible substances. Storage under a nitrogen blanket has been recommended.</p> <p><b>Component C, and D:</b> Not applicable.</p>
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**8. Exposure Controls /Personal Protection**

<i>Engineering controls</i>	<b>Component A, B and E:</b> Facilities storing and using this material should be equipped with a safety shower and eyewash station. Adequate ventilation should also be present. <b>Component C, and D:</b> Not applicable.
<i>PPE</i>	<b>Component A, B, and E</b> <i>Respiratory System:</i> A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. <i>Skin and Body:</i> Wear appropriate work uniform or laboratory coat to prevent skin exposure. <i>Hands:</i> Use chemical resistant, impervious gloves. Appropriate techniques should be used to remove potentially contaminated gloves. <i>Eyes:</i> Wear chemical splash goggles. <b>Component C, and D:</b> Not applicable.

**9. Physical and Chemical Properties**

<i>Physical State</i>	Components are liquids,
<i>Odo</i>	Not determined
<i>Solubility in Water</i>	Soluble
<i>Specific Gravity</i>	Not determined
<i>pH</i>	Component A, Not applicable Component B, no data available Component C -7.4 Component D -7.4 Component E no data available
<i>Boiling Point</i>	Not determined
<i>Melting Point</i>	Not determined
<i>Flash Point</i>	Not determined
<i>Vapor Pressure:</i>	Not determined
<i>Vapor Density:</i>	Not determined

**10.Stability and Reactivity**

<i>Thermal Decomposition</i>	Not applicable
<i>Dangerous Products of Decomposition</i>	Not Applicable
<i>Dangerous Reactions</i>	Not Applicable

**11.Toxicological Information**

<i>RTECS Number</i>	Component A: PV6210000
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	Component B: PV6210000 Component C: N/A Component D: N/A Component E: PV6210000
<i>Toxicity</i>	For Component A, B, and F contain DMSO. Oral LD50 LD50 Oral - rat - 14,500 mg/kg Inhalation LC50 LC50 Inhalation - rat - 4 h - 40250 ppm Dermal LD50 LD50 Dermal - rabbit - > 5,000 mg/kg
<i>Health Hazards</i>	<i>No data available</i>
<i>Potential Hazards</i>	<b>Potential Health Effects</b> Inhalation May be harmful if inhaled. Causes respiratory tract irritation. Ingestion Harmful if swallowed. Skin Harmful if absorbed through skin. Causes skin irritation. Eyes Causes eye irritation. Aggravated Medical Condition: Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. Dimethyl sulfoxide (DMSO) is readily absorbed through skin and may carry such materials into the body.
<i>Carcinogenicity:</i>	No data available
<i>OSHA Permissible Exposure Limit (PEL) Data</i>	No data available
<i>ACGIH Threshold Limit Values (TLV)</i> No data available	
<b><u>12. Ecological Information</u></b>	

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For Dimethyl sulfoxide (DMSO) CAS-No. 67-68-5 (*Component A, B, and E contain DMSO*)

**Toxicity**

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 34,000 mg/l - 96 h

LC50 - Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia pulex (Water flea) - 27,500 mg/l

Toxicity to algae EC50 - Lepomis macrochirus (Bluegill) - > 400,000 mg/l - 96 h

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**PBT and vPvB assessment**

No data available

**Other adverse effects**

No data available

**13. Disposal Considerations**

For Dimethyl sulfoxide (DMSO) CAS-No. 67-68-5 (Components A, B, and E)

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**14. Transport Information:**

**DOT (US)**

UN number: 2209 Class: 8 Packing group: III

Proper shipping name: Formaldehyde solutions

Reportable Quantity (RQ): 250 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG**

UN number: 2209 Class: 8 Packing group: III EMS-No: F-A, S-B

Proper shipping name: FORMALDEHYDE SOLUTION

Marine pollutant: No

**IATA**

UN number: 2209 Class: 8 Packing group: III

Proper shipping name: Formaldehyde solution

<i>UN Number</i>	N/A
<i>Hazard Class</i>	3
<i>Identification Number</i>	N/A
<i>Packing Group</i>	N/A

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<i>Proper Shipping Name (DOT)</i>	N/A
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<b><u>Regulatory information</u></b>		
<i>California Proposition 65:</i>	N/A	
US TSCA (Toxic Substance Control Act):	Component <b>A</b> : Listed Component <b>B</b> : Listed Component <b>C</b> : Not Listed Component <b>D</b> : Not listed Component <b>E</b> : listed	
<i>US CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act:</i>	Component <b>A</b> : Not listed. Component <b>B</b> : Not listed Component <b>C</b> : Not listed Component <b>D</b> : Not listed Component <b>E</b> : Not listed	
US SARA Title III	Component <b>A</b> SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard Component <b>B</b> SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard Component <b>C</b> SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard Component <b>D</b> SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard Component <b>E</b> SARA 302 components: N/A SARA 313 components: N/A, Chronic Health Hazard SARA 311/312 Hazards: Acute Health Hazard	
US Clean Air Act:	Component A, B, C, D, E, Listed under Hazardous Air Pollutants: Not listed Listed under Class 1 Ozone Depletors: Not listed Listed under Class 2 Ozone Depletors: Not listed	
<i>US Clean Water Act:</i>	Components A, B, C, D, E, Listed under “Hazardous Substances”: Not listed <i>Listed under “Priority Pollutants”: Not listed</i> Listed under “Toxic Pollutants”: Not listed	

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<b>US States: Right-to-Know: Listed in the following States:</b>					
Component A:	Component B:	Component C:	Component D:	Component E:	
Pennsylvania Revision Date 2007-03-01	Pennsylvania Revision Date 2007-03-01	N/A	N/A	Pennsylvania Revision Date 2007-03-01	
New Jersey Revision Date 2007-03-01	New Jersey Revision Date 2007-03-01	N/A	N/A	New Jersey Revision Date 2007-03-01	
Massachusetts	N/A	N/A	N/A	Massachusetts N/A	
<b>European/International Regulations:</b>					
	Component A	Component B	Component C	Component D	Component E
EC EINICS	200-664-3	200-664-3	N/A	N/A	200-664-3
EC Risk statements	36/37/38	36/37/38	N/A	N/A	36/37/38
WGK	1	1	N/A	N/A	1
Canada-DSL/NDSL	Listed	Listed	Not listed	Not listed	Listed
Canada-WHMIS classification	D2B	D2B	N/A	N/A	D2B
Canada-Canadian Ingredient Disclosure List	Listed	Listed	Not Listed	Not Listed	Listed
<b>16. Other Information</b>					
It is not intended for food, drug, and household, agricultural or cosmetic use. A technically qualified individual experienced in handling potentially hazardous chemicals must supervise its use. The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Users should make independent decisions regarding completeness of the information based on all sources available. AnaSpec shall not be held liable for any damage resulting from handling or from contact with the above product.					

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