## 1. Product and Company Identification

**Product Name:** SensoLyte® Red Transglutaminase Assay Kit *Fluorimetric*

**Manufacturer/Supplier:** AnaSpec, Inc.
www.anaspec.com
34801 Campus Drive
Fremont, CA 94555
Tel: 510-791-9560
Fax: 510-791-9572
Email: service@anaspec.com

**Catalog Number**  AS-72245

**Unit Size**  1 kit

## 2. Hazards Identification

**Emergency Overview:**

**GHS Hazard Classification:**

**GHS Physical Hazards**

- Component A: N/A
- Component B: N/A
- Component C: Flammable liquid (Category 2)
- Component D: N/A
- Component E: N/A
- Component F: N/A
- Component G: N/A
- Component H: Flammable liquid (Category 2)
- Component I: Corrosive
- Component J: Flammable liquid (Category 2)

**GHS Health and Environmental Hazards**

- Component A: N/A
- Component B: Irritant to eyes and skin
- Component C: Irritant to eyes and skin
- Component D: Irritant to eyes and skin
- Component E: Irritant to eyes and skin
- Component F: Acute toxicity, Oral (Category 5)
  - Skin irritation (Category 2)
  - Eye irritation (Category 2A)
  - Specific target organ toxicity - single exposure (Category 3)
- Component G: Irritant to eyes and skin
- Component H: Irritant to eyes and skin
- Component I: Causes serious eye damage.
  - Causes Skin irritation.
- Component J: Irritant to eyes and skin
GHS Signal Words:

Component A: N/A  
Component B: Warning  
Component C: Warning  
Component D: Warning  
Component E: Warning  
Component F: Warning  
Component G: N/A  
Component H: Warning  
Component I: Warning  
Component J: Warning

GHS Hazard Statements:

Component A: N/A  
Component B: H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.  
Component C: H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.  
Component D: H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.  
Component E: H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.  
Component F: H303 May be harmful if swallowed, H315 Causes skin irritation, H319 Causes serious eye irritation  
Component G: N/A  
Component H: H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.  
Component I: H318 Causes serious eye damage. H315 Causes skin irritation  
Component J: H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.

GHS Precautionary Statements:

Component A: - None  
Component B: P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Component C: P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Component D: P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product.  
Component E: P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product.  
Component E: P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product.  
Component F: P332 + P313 If skin irritation occurs: Get medical advice/attention. P337 + P313 If eye irritation persists: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse.  
Component G: N/A
Component H: P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Component I: P280 Wear protective gloves/eye protection/face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water. Remove contact lenses, if present and easy to do. Continue rinsing.

Component J: P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product.

HMIS Classification:

<table>
<thead>
<tr>
<th>Component A</th>
<th>Component B</th>
<th>Component C</th>
<th>Component D</th>
<th>Component E</th>
<th>Component F</th>
<th>Component G</th>
<th>Component H</th>
<th>Component I</th>
<th>Component J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 2</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
</tr>
<tr>
<td>Flammability: 0</td>
<td>Flammability: 0</td>
<td>Flammability: 0</td>
<td>Flammability: 2</td>
<td>Flammability: 0</td>
<td>Flammability: 1</td>
<td>Flammability: 0</td>
<td>Flammability: 0</td>
<td>Flammability: 1</td>
<td>Flammability: 0</td>
</tr>
<tr>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
</tr>
</tbody>
</table>

NFPA Rating:

<table>
<thead>
<tr>
<th>Component A</th>
<th>Component B</th>
<th>Component C</th>
<th>Component D</th>
<th>Component E</th>
<th>Component F</th>
<th>Component G</th>
<th>Component H</th>
<th>Component I</th>
<th>Component J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 2</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
<td>Health hazard: 0</td>
</tr>
<tr>
<td>Flammability: 0</td>
<td>Flammability: 0</td>
<td>Flammability: 0</td>
<td>Flammability: 2</td>
<td>Flammability: 0</td>
<td>Flammability: 1</td>
<td>Flammability: 0</td>
<td>Flammability: 0</td>
<td>Flammability: 1</td>
<td>Flammability: 0</td>
</tr>
<tr>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
</tr>
</tbody>
</table>

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Description</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Component B</td>
<td>Proprietary</td>
<td>N/A</td>
</tr>
<tr>
<td>Component C</td>
<td>Contains DMSO</td>
<td>67-68-5</td>
</tr>
<tr>
<td>Component D</td>
<td>Proprietary</td>
<td>N/A</td>
</tr>
<tr>
<td>Component E</td>
<td>Proprietary</td>
<td>N/A</td>
</tr>
<tr>
<td>Component F</td>
<td>1 M DTT solution</td>
<td>16096-97-2</td>
</tr>
<tr>
<td>Component G</td>
<td>Proprietary</td>
<td>N/A</td>
</tr>
<tr>
<td>Component H</td>
<td>Contains DMSO</td>
<td>67-68-5</td>
</tr>
<tr>
<td>Component I</td>
<td>Contains urea hydrogen peroxide</td>
<td>124-43-6</td>
</tr>
<tr>
<td>Component J</td>
<td>Contains DMSO</td>
<td>67-68-5</td>
</tr>
</tbody>
</table>

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, G
Inhalation: N/A
Ingestion: N/A
Skin: N/A
Eyes: N/A

Component B, C, D, E, H, J
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 F and I

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion: 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: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

5. Fire Fighting Measures

Extinguishing media:

Component C and J: For small fires, use dry chemical, or carbon dioxide. For large fires, use water spray from a safe distance.
Component C and D: Use water spray, dry chemical or carbon dioxide.

Special firefighting procedures: N/A

Unusual fire and explosions hazards:

Component C and J: 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, nitrogen oxides formed under fire conditions.

6. Accidental Release Measures

Containment and spill response

Component B, C, D, E, F, G, H and J: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
Component I: If necessary, neutralize with dilute base. Use appropriate equipment to place in appropriate waste disposal container. Spread water on contaminated surface and dispose of according to local and regional requirements.

PPE

Use personal protective equipment

7. Handling and Storage

Component C, F, I and J:
Handling: 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.
Storage: Store in a tightly closed container away from moisture, heat, and flame. Store away from incompatible substances.

Component B, D, E, G, and H:
Handling: Avoid contact with skin and eyes.
Storage: Keep container tightly closed in a dry and well-ventilated place.

8. Exposure Controls / Personal Protection

Engineering controls

Component C, F, I and J: Facilities storing and using this material should be equipped with a safety shower and eyewash station. Adequate ventilation should also
be present.
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
**Component B, D, E, G and H**: Not applicable.

**PPE**

**Components C, F, I, and J:**

*Respiratory System*: 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.

*Skin and Body*: Wear appropriate work uniform or laboratory coat to prevent skin exposure.

*Hands*: Use chemical resistant, impervious gloves. Appropriate techniques should be used to remove potentially contaminated gloves.

*Eyes*: Wear chemical splash goggles (EN166)

### 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Not determined</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH</td>
<td>Component B – 7.5</td>
</tr>
<tr>
<td></td>
<td>Component E – 6.0</td>
</tr>
<tr>
<td></td>
<td>Component I-2.0</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

### 10. Stability and Reactivity

*Thermal Decomposition*: Not applicable

*Dangerous Products of Decomposition*: Not applicable

*Dangerous Reactions*: Not applicable

### 11. Toxicological Information

*RTECS Number*  
Component C: PV6210000  
Component F: EK1612000  
Component I: MW4025000  
Component J: PV621000

*Toxicity*  
Component C and Component J contain DMSO.

*For 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

Component F
LD50 Intraperitoneal - mouse - 179 mg/kg
Component I contain Hydrochloric Acid.
For HCl:
Oral LD50
LD50 Oral - rat - 700 mg/kg
Inhalation LC50
Not listed
Dermal LD50
LD50 Dermal - rabbit - 5,010 mg/kg

Health Hazards
No data available

Potential Hazards
Potential Health Effects
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion: Harmful if swallowed.
Skin: May be harmful if absorbed through skin. May cause 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 is readily absorbed through skin and may carry such materials into the body.

Carcinogenicity:
No data available
OSHA Permissible Exposure Limit (PEL) Data
No data available
ACGIH Threshold Limit Values (TLV)
No data available

12. Ecological Information

For Dimethyl sulfoxide (DMSO) CAS-No. 67-68-5 (Component C and J 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
Components C and D
No data available
Components A, B, D, E, F, G, H, and I
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 Components C, F, I, and J
The combustible material (Component C and J) 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: IATA Exempted quantities labeling

UN Number
N/A
Hazard Class
3
<table>
<thead>
<tr>
<th>Identification Number</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing Group</td>
<td>N/A</td>
</tr>
<tr>
<td>Proper Shipping Name (DOT)</td>
<td>N/A</td>
</tr>
</tbody>
</table>
### 15. Regulatory information

<table>
<thead>
<tr>
<th>California Proposition 65</th>
<th>N/A</th>
</tr>
</thead>
</table>
| US TSCA (Toxic Substance Control Act) | Component A: Not listed  
Component B: Not listed  
Component C: Listed  
Component D: Not listed  
Component E: Not listed  
Component F: Not listed  
Component G: Not listed  
Component H: Listed  
Component I: Listed  
Component J: Listed |
| US CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) | Component A: N/A  
Component B: N/A  
Component C: 261.33 8(d).  
Component D: N/A  
Component E: N/A  
Component F: N/A  
Component G: N/A  
Component H: 261.33 8(d).  
Component I: 231-595-7  
Component J: 261.33 8(d.) |
| US SARA Title III | Component A  
Component B  
Component C  
SARA 302 components: N/A  
SARA 313 components: N/A  
SARA 311/312 Hazards: N/A  
Component D  
Component E  
Component F  
SARA 302 components: N/A  
SARA 313 components: N/A  
SARA 311/312 Hazards: Acute Health Hazard  
Component G  
Component H  
SARA 302 components: N/A  
SARA 313 components: N/A  
SARA 311/312 Hazards: N/A  
Component I  
SARA 302 components: N/A  
SARA 313 components: N/A  
SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard  
Component J  
SARA 302 components: N/A  
SARA 313 components: N/A  
SARA 311/312 Acute Health Hazard |
<table>
<thead>
<tr>
<th>Component A:</th>
<th>Component B:</th>
<th>Component C:</th>
<th>Component D:</th>
<th>Component E:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania N/A</td>
<td>Pennsylvania N/A</td>
<td>Pennsylvania Revision Date 2007-03-01 CAS 67-68-5</td>
<td>Pennsylvania N/A</td>
<td>Pennsylvania N/A</td>
</tr>
<tr>
<td>New Jersey N/A</td>
<td>New Jersey N/A</td>
<td>New Jersey Revision Date 2007-03-01 CAS 67-68-5</td>
<td>New Jersey N/A</td>
<td>New Jersey N/A</td>
</tr>
<tr>
<td>Massachusetts N/A</td>
<td>Massachusetts N/A</td>
<td>Massachusetts N/A</td>
<td>Massachusetts N/A</td>
<td>Massachusetts N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component F:</th>
<th>Component G:</th>
<th>Component H:</th>
<th>Component I:</th>
<th>Component J:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania Revision Date 2007-03-01 CAS#16096-97-2</td>
<td>Pennsylvania N/A</td>
<td>Pennsylvania Revision Date 2007-03-01 CAS 67-68-5</td>
<td>Pennsylvania N/A</td>
<td>Pennsylvania Revision Date 2007-03-01 CAS 67-68-5</td>
</tr>
<tr>
<td>New Jersey Revision Date 2007-03-01 CAS#16096-97-2</td>
<td>New Jersey N/A</td>
<td>New Jersey Revision Date 2007-03-01 CAS 67-68-5</td>
<td>New Jersey N/A</td>
<td>New Jersey Revision Date 2007-03-01 CAS 67-68-5</td>
</tr>
<tr>
<td>Massachusetts N/A</td>
<td>Massachusetts N/A</td>
<td>Massachusetts N/A</td>
<td>Massachusetts N/A</td>
<td>Massachusetts N/A</td>
</tr>
</tbody>
</table>
16. Other Information

It is not intended for food, drug, 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.