

Safety Data Sheet (SDS)

<i>Revision Number: 1.0</i>	<i>Last updated: December 2017</i>
-----------------------------	------------------------------------

1. Product and Company Identification

<i>Product Name:</i>	SensoLyte[®] Red Transglutaminase Assay Kit *Fluorimetric*
<i>Manufacturer/Supplier:</i>	AnaSpec, Inc. www.anspec.com 34801 Campus Drive Fremont, CA 94555 Tel: 510-791-9560 Fax: 510-791-9572 Email: service@anspec.com
<i>Catalog Number</i>	AS-72245
<i>Unit Size</i>	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

AnaSpec Inc.

34801 Campus Drive, Fremont, CA 94555

Toll-Free: 800-452-5530 • Tel: 510-791-9560 • Fax: 510-791-9573

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

AnaSpec Inc.

34801 Campus Drive, Fremont, CA 94555

Toll-Free: 800-452-5530 • Tel: 510-791-9560 • Fax: 510-791-9573

- 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:

Component A:	Component B:	Component C:	Component D:	Component E:	Component F:	Component G:	Component H:	Component I:	Component J:
Health hazard: 0	Health hazard: 2	Health hazard: 0	Health hazard: 0	Health hazard: 2	Health hazard: 0				
Flammability 0	Flammability 0	Flammability 2	Flammability 0	Flammability 0	Flammability 1	Flammability 0	Flammability 2	Flammability: 0	Flammability: 1
Physical hazards: 0									

NFPA Rating:

Component A:	Component B:	Component C:	Component D:	Component E:	Component F:	Component G:	Component H:	Component I:	Component J:
Health hazard: 0	Health hazard: 2	Health hazard: 0	Health hazard: 0	Health hazard: 2	Health hazard: 0				
Flammability 0	Flammability 0	Flammability 2	Flammability 0	Flammability 0	Flammability 1	Flammability 0	Flammability 2	Flammability: 0	Flammability: 1
Physical hazards: 0									

3. Composition / Information on Ingredients**Ingredients/Components:**

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

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.

AnaSpec Inc.

34801 Campus Drive, Fremont, CA 94555

Toll-Free: 800-452-5530 • Tel: 510-791-9560 • Fax: 510-791-9573

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

<i>Extinguishing media:</i>	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.
<i>Special firefighting procedures:</i>	N/A
<i>Unusual fire and explosions hazards:</i>	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

<i>Containment and spill response</i>	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.
<i>PPE</i>	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

<i>Engineering controls</i>	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
-----------------------------	--

AnaSpec Inc.

34801 Campus Drive, Fremont, CA 94555

Toll-Free: 800-452-5530 • Tel: 510-791-9560 • Fax: 510-791-9573

	<p>be present.</p> <p>Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.</p> <p>Component B, D, E, G and H: Not applicable.</p>
<i>PPE</i>	<p>Components C, F, I, and J:</p> <p><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.</p> <p><i>Skin and Body:</i> Wear appropriate work uniform or laboratory coat to prevent skin exposure.</p> <p><i>Hands:</i> Use chemical resistant, impervious gloves. Appropriate techniques should be used to remove potentially contaminated gloves.</p> <p><i>Eyes:</i> Wear chemical splash goggles (EN166)</p>
<u>9. Physical and Chemical Properties</u>	
<i>Physical State</i>	Liquid
<i>Odor</i>	Not determined
<i>Solubility in Water</i>	Soluble
<i>Specific Gravity</i>	Not determined
<i>pH</i>	<p>Component B – 7.5</p> <p>Component E – 6.0</p> <p>Component I-2.0</p>
<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
<u>10. Stability and Reactivity</u>	
<i>Thermal Decomposition</i>	Not applicable
<i>Dangerous Products of Decomposition</i>	Not applicable
<i>Dangerous Reactions</i>	Not applicable
<u>11. Toxicological Information</u>	
<i>RTECS Number</i>	<p>Component C: PV6210000</p> <p>Component F: EK1612000</p> <p>Component I: MW4025000</p> <p>Component J: PV621000</p>
<i>Toxicity</i>	<p><i>Component C and Component J contain DMSO.</i></p> <p>For DMSO</p> <p>Oral LD50</p> <p>LD50 Oral - rat - 14,500 mg/kg</p> <p>Inhalation LC50</p> <p>LC50 Inhalation - rat - 4 h - 40250 ppm</p> <p>Dermal LD50</p> <p>LD50 Dermal - rabbit - > 5,000 mg/kg</p> <p><i>Component F</i></p>

AnaSpec Inc.

34801 Campus Drive, Fremont, CA 94555

Toll-Free: 800-452-5530 • Tel: 510-791-9560 • Fax: 510-791-9573

	LD50 Intraperitoneal - mouse - 179 mg/kg <i>Component I contain Hydrochloric Acid.</i> For HCl: Oral LD50 LD50 Oral - rat - 700 mg/kg Inhalation LC50 Not listed Dermal LD50 LD50 Dermal - rabbit - 5,010 mg/kg
<i>Health Hazards</i>	No data available
<i>Potential Hazards</i>	Potential Health Effects <i>Inhalation:</i> May be harmful if inhaled. Causes respiratory tract irritation. <i>Ingestion:</i> Harmful if swallowed. <i>Skin:</i> May be harmful if absorbed through skin. May cause skin irritation. <i>Eyes:</i> 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.
<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
<u>12. Ecological Information</u>	
<i>For Dimethyl sulfoxide (DMSO) CAS-No. 67-68-5 (Component C and J contain DMSO)</i>	
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	
<i>Components C and D</i>	
No data available	
<i>Components A, B, D, E, F, G, H, and I</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	
<u>13. Disposal Considerations</u>	
<i>For Components C, F, I, and J</i>	
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.	
<u>14. Transport Information: IATA Exempted quantities labeling</u>	
<i>UN Number</i>	N/A
<i>Hazard Class</i>	3

AnaSpec Inc.

34801 Campus Drive, Fremont, CA 94555

Toll-Free: 800-452-5530 • Tel: 510-791-9560 • Fax: 510-791-9573

<i>Identification Number</i>	N/A
<i>Packing Group</i>	N/A
<i>Proper Shipping Name (DOT)</i>	N/A

AnaSpec Inc.

34801 Campus Drive, Fremont, CA 94555

Toll-Free: 800-452-5530 • Tel: 510-791-9560 • Fax: 510-791-9573

15. Regulatory information

California Proposition 65	N/A
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 N/A Component B N/A Component C SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: N/A Component D N/A Component E N/A Component F SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Acute Health Hazard Component G N/A 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 Acute Health Hazard, Chronic Health Hazard Component J SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Acute Health Hazard

AnaSpec Inc.

34801 Campus Drive, Fremont, CA 94555

Toll-Free: 800-452-5530 • Tel: 510-791-9560 • Fax: 510-791-9573

US Clean Air Act	<p>Component A, B, C, D, E, F, G, H, I and J <i>Listed under Hazardous Air Pollutants: Not listed</i> <i>Listed under Class 1 Ozone Depletors: Not listed</i> <i>Listed under Class 2 Ozone Depletors: Not listed</i></p>
US Clean Water Act	<p>Components A, B, D, E, G, H <i>Listed under "Hazardous Substances": Not listed</i> <i>Listed under "Priority Pollutants": Not listed</i> <i>Listed under "Toxic Pollutants": Not listed</i></p> <p>Components C, F, I, J <i>Listed under "Hazardous Substances": Listed</i> <i>Listed under "Priority Pollutants": Not listed</i> <i>Listed under "Toxic Pollutants": Not listed</i></p>

US States: Right-to-Know: Listed in the following States:

Component A:	Component B:	Component C:	Component D:	Component E:
Pennsylvania N/A	Pennsylvania N/A	Pennsylvania Revision Date 2007-03-01 CAS 67-68-5	Pennsylvania N/A	Pennsylvania N/A
New Jersey N/A	New Jersey N/A	New Jersey Revision Date 2007-03-01 CAS 67-68-5	New Jersey N/A	New Jersey N/A
Massachusetts N/A	Massachusetts N/A	Massachusetts N/A	Massachusetts N/A	Massachusetts N/A

Component F:	Component G:	Component H:	Component I:	Component J:
Pennsylvania Revision Date 2007-03-01 CAS#16096-97-2	Pennsylvania N/A	Pennsylvania Revision Date 2007-03-01 CAS 67-68-5	Pennsylvania N/A	Pennsylvania Revision Date 2007-03-01 CAS 67-68-5
New Jersey Revision Date 2007-03-01 CAS#16096-97-2	New Jersey N/A	New Jersey Revision Date 2007-03-01 CAS 67-68-5	New Jersey N/A	New Jersey Revision Date 2007-03-01 CAS 67-68-5
Massachusetts N/A	Massachusetts N/A	Massachusetts N/A	Massachusetts N/A	Massachusetts N/A

AnaSpec Inc.

34801 Campus Drive, Fremont, CA 94555

Toll-Free: 800-452-5530 • Tel: 510-791-9560 • Fax: 510-791-9573

European/International Regulations:

	Component A:	Component B:	Component C:	Component D:	Component E:
EC EINECS	N/A	N/A	200-664-3	N/A	N/A
<i>EC Risk statements</i>	N/A	N/A	36/37/38	N/A	N/A
WGK	N/A	N/A	1	N/A	N/A
<i>Canada-DSL/NDSL</i>	Not listed	Not listed	Listed	Not listed	Not listed
<i>Canada-WHMIS classification</i>	N/A	N/A	D2B	N/A	N/A
<i>Canada-Canadian Ingredient Disclosure List</i>	Not listed	Not listed	Listed	Not Listed	Not listed
	Component F:	Component G:	Component H:	Component I:	Component J:
EC EINECS	240-263-0	N/A	200-664-3	N/A	200-664-3
<i>EC Risk statements</i>	36/37/38--22	N/A	36/37/38	N/A	36/37/38
WGK	N/A	N/A	1	1	1
<i>Canada-DSL/NDSL</i>	Not Listed	Not listed	Listed	Not listed	Listed
<i>Canada-WHMIS classification</i>	D1B, D2B	N/A	D2B	N/A	D2B
<i>Canada-Canadian Ingredient Disclosure List</i>	Not listed	Not listed	Listed	Not listed	Listed

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.

AnaSpec Inc.

34801 Campus Drive, Fremont, CA 94555

Toll-Free: 800-452-5530 • Tel: 510-791-9560 • Fax: 510-791-9573