

Material Safety Data Sheet (MSDS)

Revision Number: 1.0	Last updated: 07/24/2013
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1. Product and Company Identification

Product Name:	SensoLyte [®] 570 West Nile Virus Protease 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	72080
Unit Size	1 kit

2. Hazards Identification

Emergency Overview:

GHS Hazard Classification:

GHS Physical Hazards

- Component A: Flammable liquid (Category 4)
- Component B: Flammable liquid (Category 4)
- Component C: Not applicable
- Component D: 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: Not applicable
- Component D: Irritant to eyes and skin

GHS Signal Words:

- Component A: Warning
- Component B: Warning
- Component C: Not applicable
- Component D: Warning

GHS Hazard Statements:

- Component A: H227 Combustible liquid
- Component B: H227 Combustible liquid
- Component C: Not applicable
- Component D: H227 Combustible liquid

GHS Precautionary Statements:

Component A: None

Component B: None

Component C: None

Component D: None

HMIS Classification:

Component A:	Component B:	Component C:	Component D:
<i>Health hazard: 0</i>	<i>Health hazard: 0</i>	<i>Health hazard: 0</i>	<i>Health hazard: 0</i>
<i>Flammability: 2</i>	<i>Flammability: 2</i>	<i>Flammability: 1</i>	<i>Flammability: 2</i>
<i>Physical hazards: 0</i>	<i>Physical hazards: 0</i>	<i>Physical hazards: 0</i>	<i>Physical hazards: 0</i>

NFPA Rating:

Component A:	Component B:	Component C:	Component D:
<i>Health hazard: 0</i>	<i>Health hazard: 0</i>	<i>Health hazard: 0</i>	<i>Health hazard: 0</i>
<i>Fire: 2</i>	<i>Fire: 2</i>	<i>Fire: 1</i>	<i>Fire: 2</i>
<i>Reactivity hazard: 0</i>	<i>Reactivity hazard: 0</i>	<i>Reactivity hazard: 0</i>	<i>Reactivity hazard: 0</i>

3. Composition / Information on Ingredients

Ingredients/Components:

<i>Chemical Name:</i>	<i>Description</i>	<i>CAS Number:</i>
Component A	Contains DMSO	67-68-5
Component B	Contains DMSO	67-68-5
Component C	Contains glycerol	56-81-5
Component D	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

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: 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 D

Inhalation: If breathe d 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

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<p>a physician.</p> <p><i>Skin:</i> Wash off with soap and plenty of water. Consult a physician.</p> <p><i>Eyes:</i> Flush eyes with water as a precaution.</p>	
5. Fire Fighting Measures	
<i>Extinguishing media:</i>	<p>Component A, B and D: For small fires, use dry chemical, or carbon dioxide. For large fires, use water spray from a safe distance.</p> <p>Component C: Use water spray, dry chemical or carbon dioxide.</p>
<i>Special firefighting procedures:</i>	<p>Component A, B and D: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.</p> <p>Component C: Wear self contained breathing apparatus for fire fighting if necessary.</p>
<i>Unusual fire and explosions hazards:</i>	<p>Component A, B and D: 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>Component C: Hazardous carbon oxides and nitrogen oxides formed under fire conditions.</p>
6. Accidental Release Measures	
<i>Containment and spill response</i>	<p>Component A, B and D: 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>Component C: Avoid breathing vapors, mist or gas. Do not let product enter drains. Keep in suitable, closed containers for disposal.</p>
<i>PPE</i>	Use personal protective equipment
7. Handling and Storage	
<p>Component A, B and D:</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>Component C:</p> <p><i>Handling:</i> Normal measures for preventive fire protection.</p> <p><i>Storage:</i> Keep container tightly closed in a dry and well-ventilated place.</p>	
8. Exposure Controls / Personal Protection	
<i>Engineering controls</i>	Component A, B, and D: Facilities storing and using this material should be equipped

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	with a safety shower and eyewash station. Adequate ventilation should also be present. Component C: 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.
<i>PPE</i>	<p>Components A, B and D: <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 (EN166)</p> <p>Component C: <i>Respiratory protection:</i> Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). <i>Skin and Body:</i> Wear appropriate work uniform or laboratory coat to prevent skin exposure. <i>Hands:</i> For prolonged or repeated contact use protective gloves. <i>Eyes:</i> Safety glasses</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>	Component C: 8.0
<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>	Component A: PV6210000 Component B: PV6210000

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	<p>Component C: MA8050000</p> <p>Component D: PV6210000</p>
<i>Toxicity</i>	<p><i>Components A, Component B and Component D 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>Components C:</i></p> <p>Acute toxicity</p> <p>LD50 Oral - rat - 12,600 mg/kg</p> <p>LD50 Dermal - rabbit - > 10,000 mg/kg</p> <p>Irritation and corrosion</p> <p>Skin - rabbit - Mild skin irritation - 24 h</p> <p>Eyes - rabbit - Mild eye irritation - 24 h</p>
<i>Health Hazards</i>	<i>No data available</i>
<i>Potential Hazards</i>	<p>Potential Health Effects</p> <p><i>Inhalation:</i> May be harmful if inhaled. Causes respiratory tract irritation.</p> <p><i>Ingestion:</i> Harmful if swallowed.</p> <p><i>Skin:</i> May be harmful if absorbed through skin. May cause skin irritation.</p> <p><i>Eyes:</i> Causes eye irritation.</p> <p>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.</p>
<i>Carcinogenicity:</i>	No data available
<i>OSHA Permissible Exposure Limit(PEL)</i>	No data available
<i>Data</i>	
<i>ACGIH Threshold Limit Values (TLV)</i>	No data available
<u>12. Ecological Information</u>	
<p><i>For Dimethyl sulfoxide (DMSO) CAS-No. 67-68-5 (Component A, B and D contain DMSO)</i></p> <p>Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 34,000 mg/l - 96 h</p> <p>LC50 - Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96 h</p> <p>Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia pulex (Water flea) - 27,500 mg/l</p> <p>Toxicity to algae EC50 - Lepomis macrochirus (Bluegill) - > 400,000 mg/l - 96 h</p> <p><i>Components C:</i></p> <p>Toxicity to fish LC50 - Carassius auratus (goldfish) - > 5,000 mg/l</p> <p>LC50 - Pimephales promelas (fathead minnow) - 44,000 mg/l</p> <p>LC50 - other fish - > 100,100 mg/l</p> <p>LC50 - Oncorhynchus mykiss (rainbow trout) - 67,500 mg/l - 96 h</p>	
<u>13. Disposal Considerations</u>	
<p><i>For Components A, B, C and D</i></p> <p>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.</p> <p>Contaminated packaging</p> <p>Dispose of as unused product.</p>	
<u>14. Transport Information:</u> IATA Exempted quantities labeling	

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<i>UN Number</i>	N/A
<i>Hazard Class</i>	3
<i>Identification Number</i>	N/A
<i>Packing Group</i>	N/A
<i>Proper Shipping Name (DOT)</i>	N/A

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15. Regulatory information

California Proposition 65	N/A
US TSCA (Toxic Substance Control Act)	Component A: Listed Component B: Listed Component C: Listed Component D: Listed
US CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)	Component A: 261.33 8(d). Component B: 261.33 8(d). Component C: N/A Component D: 261.33 8(d)
US SARA Title III	Component A SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard Component B SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard Component C SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Chronic Health Hazard Component D SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard
US Clean Air Act	Component A, B, C and D <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>
US Clean Water Act	Components A, B, C and D <i>Listed under "Hazardous Substances": Not listed</i> <i>Listed under "Priority Pollutants": Not listed</i> <i>Listed under "Toxic Pollutants": Not listed</i>

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

Component A:	Component B:	Component C:	Component D:
Pennsylvania Revision Date 2007-03-01 67-68-5	Pennsylvania Revision Date 2007-03-01 67-68-5	Pennsylvania Revision Date 1991-07-01	Pennsylvania Revision Date 2007-03-01 67-68-5
New Jersey Revision Date 2007-03-01 67-68-5	New Jersey Revision Date 2007-03-01 67-68-5	New Jersey Revision Date 1991-07-01	New Jersey Revision Date 2007-03-01 67-68-5
Massachusetts N/A	Massachusetts N/A	Massachusetts Revision Date 1991-07-01	Massachusetts N/A

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European/International Regulations:

	Component A:	Component B:	Component C:	Component D:
EC EINECS	200-664-3	200-664-3	200-289-5	200-664-3
<i>EC Risk statements</i>	36/37/38	36/37/38	N/A	36/37/38
<i>WGK</i>	1	1	0	1
<i>Canada-DSL/NDL</i>	Listed	Listed	Listed	Listed
<i>Canada-WHMIS classification</i>	D2B	D2B	N/A	D2B
<i>Canada-Canadian Ingredient Disclosure List</i>	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.

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