

Safety Data Sheet (SDS)

<i>Revision Number: 1.1</i>	<i>Last updated: April 2015</i>
<u>1. Product and Company Identification</u>	
<i>Product Name:</i>	SensoLyte[®] 520 Cathepsin L Assay Kit *Fluorimetric*
<i>Manufacturer/Supplier:</i>	AnaSpec, Inc. www.anaspec.com 34801 Campus Drive Fremont, CA 94555 Tel: 510-791-9560 Fax: 510-791-9572 Email: service@anaspec.com
<i>Catalog Number</i>	AS-72218
<i>Unit Size</i>	1 kit
<u>2. Hazards Identification</u>	
<i>Emergency Overview:</i>	
<i>GHS Hazard Classification:</i>	
<i>GHS Physical Hazards</i>	
<p style="margin-left: 40px;">Component A,B,E: Flammable liquid (Category 4)</p> <p style="margin-left: 40px;">Component C: Not Applicable</p> <p style="margin-left: 40px;">Component D: Acute toxicity, Oral (Category 5) Acute toxicity, Inhalation (Category 5), Skin irritation (Category 3), Eye irritation (Category 2B)</p> <p style="margin-left: 40px;">Component F: Non Hazardous</p>	
<i>GHS Health and Environmental Hazards</i>	
<p style="margin-left: 40px;">Component A,B,E: Irritant to eyes and skin</p> <p style="margin-left: 40px;">Component C: Irritant to eyes, skin, and respiratory system</p> <p style="margin-left: 40px;">Component D: Irritant to eyes and skin, acute toxicity, oral and by inhalation</p> <p style="margin-left: 40px;">Component F: Target organ effect, toxic by ingestion, irritant</p>	
<i>GHS Signal Words:</i>	
<p style="margin-left: 40px;">Component A,B,D,E,F: Warning</p> <p style="margin-left: 40px;">Component C: None</p>	
<i>GHS Hazard Statements:</i>	
<p style="margin-left: 40px;">Component A,B,E: H227 Combustible liquid</p> <p style="margin-left: 40px;">Component C: H303 + H333 May be harmful if swallowed or if inhaled, H316 Causes mild skin irritation, H320 Causes eye irritation</p> <p style="margin-left: 40px;">Component D: H303 + H333 May be harmful if swallowed or if inhaled, H316 Causes mild skin irritation, H320 Causes eye irritation</p> <p style="margin-left: 40px;">Component F: H303 May be harmful if swallowed, H315 Causes skin irritation, H319 Causes serious eye irritation</p>	

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*GHS Precautionary Statements:***Component A,B,E:** None**Component C, D:** 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 F:** P305 +P351 +P38 -IF NEYS: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy told. Continue rinsing
P37 +P31 -If eye irritation persist: Get medical advice/attention
P32 +P31 -If skin irritation occurs: Get medical advice/attention
P264 -Wash hands thoroughly after handling
P280 -Wear protective gloves/protective clothing/eye protection/face protection
P362 -Take of contaminated clothing and wash before use*HMS Classification:*

Component A:	Component B:	Component C:	Component D:	Component E:	Component F:
<i>Health hazard: 0</i>	<i>Health hazard: 0</i>	<i>Health hazard: 0</i>	<i>Health hazard: 1</i>	<i>Health hazard: 0</i>	<i>Health hazard: 1</i>
<i>Flammability: 2</i>	<i>Flammability: 2</i>	<i>Flammability: 0</i>	<i>Flammability: 1</i>	<i>Flammability: 2</i>	<i>Flammability: 0</i>
<i>Physical hazards: 0</i>	<i>Physical hazards: 0</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:	Component E:	Component F:
<i>Health hazard: 0</i>	<i>Health hazard: 0</i>	<i>Health hazard: 0</i>	<i>Health hazard: 1</i>	<i>Health hazard: 0</i>	<i>Health hazard: 1</i>
<i>Fire: 2</i>	<i>Fire: 2</i>	<i>Fire: 0</i>	<i>Fire: 1</i>	<i>Fire: 2</i>	<i>Fire: 0</i>
<i>Reactivity hazard: 0</i>	<i>Reactivity hazard: 0</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	Proprietary	NA
Component D	Proprietary	NA
Component E	Contains DMSO	67-68-5
Component F	1 M DTT solution	16096-97-2

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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,B,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.

Component C,D

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.

Component F

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: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

5. Fire Fighting Measures

<i>Extinguishing media:</i>	Component A, B and E: For small fires, use dry chemical, or carbon dioxide. For large fires, use water spray from a safe distance. Component D and F: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<i>Special firefighting procedures:</i>	Component A, B and E: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Component D and F: Wear self-contained breathing apparatus (SCBA) if necessary.
<i>Unusual fire and explosions hazards:</i>	Component A, B and E: 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. Component D: Carbon oxides and sodium oxides formed under fire conditions. Component F: Hazardous carbon oxides and sulphur oxides formed under fire conditions.

6. Accidental Release Measures

<i>Containment and spill response</i>	Component A, B and E: 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.
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	Component C, D and F: Keep in suitable, closed container for disposal. Do not let material enter drains.
<i>PPE</i>	Use personal protective equipments
<u>7. Handling and Storage</u>	
<p>Component A, B and E: <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. <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 and D: <i>Handling:</i> Avoid contact with skin and eyes. <i>Storage:</i> Keep container tightly closed in a dry and well-ventilated place.</p> <p>Component F: <i>Handling:</i> Avoid contact with skin and eyes. <i>Storage:</i> Store in a tightly closed container in a dry place at -20°C.</p>	
<u>8. Exposure Controls / Personal Protection</u>	
<i>Engineering controls</i>	<p>Component A, B, E and F: Facilities storing and using this material should be equipped with a safety shower and eyewash station. Adequate ventilation should also be present.</p> <p>Component C and D: Wear suitable protective clothing, including gloves, safety glasses, dust mask, and laboratory coat.</p>
<i>PPE</i>	<p>Components A, B, C, D, E and F: <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>
<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: 4.0 Component D: 5.5
<i>Boiling Point</i>	Not determined
<i>Melting Point</i>	Not determined
<i>Flash Point</i>	Not determined

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Vapor Pressure:	Not determined
Vapor Density:	Not determined
<u>10. Stability and Reactivity</u>	
Thermal Decomposition	Not applicable
Dangerous Products of Decomposition	Not applicable
Dangerous Reactions	Not applicable
<u>11. Toxicological Information</u>	
RTECS Number	Component A: PV6210000 Component B: PV6210000 Component C: N/A Component D: N/A Component E: PV6210000 Component F: EK1612000
Toxicity	Components A, Component B and Component E 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 Components D: Oral LD50 - rat - 3,530 mg/kg Inhalation LC50 - rat - 1 h - > 30,000 mg/m3 Dermal LD50 - rabbit - > 10,000 mg/kg Skin - rabbit - Mild skin irritation - 24 h Eyes - rabbit - Mild eye irritation Component F LD50 - Intraperitoneal - mouse - 179 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
<u>12. Ecological Information</u>	

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

Component D

Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 13,330 mg/l - 120 h

LC50 - Lepomis macrochirus (Bluegill) - 5,000 mg/l - 24 h

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - > 1,000 mg/l - 48 h

Persistence and degradability

Biodegradability Result: 99 % - Readily biodegradable.

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 A, B, C, D, E and F

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:

<i>UN Number</i>	N/A
<i>Hazard Class</i>	N/A
<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					
<i>California Proposition 65:</i>		Not listed			
US TSCA (Toxic Substance Control Act):		Component A: Listed Component B: Listed Component C: N/A Component D: Listed Component E: Listed Component F: Not Listed			
<i>US CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):</i>		Component A: 261.33 8(d). Component B: 261.33 8(d). Component C: N/A Component D : Not listed Component E: 261.33 8(d). Component F: Not listed			
US SARA Title III		Component A,B,E SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard Component C,D SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: N/A Component F SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Acute Health Hazard			
US Clean Air Act:		Component A, B, C, D, E and F 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 and F Listed under "Hazardous Substances": Not listed Listed under "Priority Pollutants": Not listed Listed under "Toxic Pollutants": Not listed			
US States: Right-to-Know: Listed in the following States:					
Component A:	Component B:	Component C:	Component D:	Component E:	Component F:
Pennsylvania Revision Date 2007-03-01 67-68-5	Pennsylvania Revision Date 2007-03-01 67-68-5	Pennsylvania N/A	Pennsylvania CAS# 127-09-3	Pennsylvania Revision Date 2007-03-01 67-68-5	Pennsylvania CAS#16096-97-2
New Jersey Revision Date 2007-03-01 67-68-5	New Jersey Revision Date 2007-03-01 67-68-5	New Jersey N/A	New Jersey CAS# 127-09-3	New Jersey Revision Date 2007-03-01 67-68-5	New Jersey CAS#16096-97-2
Massachusetts N/A	Massachusetts N/A	Massachusetts N/A	Massachusetts N/A	Massachusetts N/A	Massachusetts N/A

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European/International Regulations:

	Component A:	Component B:	Component C:	Component D:	Component E:	Component F:
EC EINICS	200-664-3	200-664-3	N/A	204-823-8	200-664-3	240-263-0
<i>EC Risk statements</i>	36/37/38	36/37/38	N/A	-	36/37/38	36/37/38--22
<i>WGK</i>	1	1	N/A	N/A	1	N/A
<i>Canada-DSL/NDSL</i>	Listed	Listed	Not Listed	Listed	Listed	Not Listed
<i>Canada-WHMIS classification</i>	D2B	D2B	N/A	D2B	D2B	D1B, D2B
<i>Canada-Canadian Ingredient Disclosure List</i>	Listed	Listed	Not Listed	Not Listed	Listed	Not 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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