

Material Safety Data Sheet (MSDS)

Revision Number: 1.0		Last updated: April 2012	
1. Product and Company Identification			
Product Name:		SensoLyte® 520 Thrombin Activity 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		72129	
Unit Size		1 kit	
2. Hazards Identification			
<p><u>Emergency Overview:</u></p> <p><u>GHS Hazard Classification:</u></p> <p><u>GHS Physical Hazards</u></p> <p>Component A: Flammable liquid (Category 4)</p> <p>Component B: Flammable liquid (Category 4)</p> <p>Component C: Not Applicable</p> <p>Component D: Not Applicable</p> <p>Component E: Flammable liquid (Category 4)</p> <p>Component F: Acute toxicity, Oral (Category 4) Acute toxicity, Dermal (Category 3), Skin irritation (Category 2), Eye irritation (Category 2A), Specific target organ toxicity – single exposure (Category 3), Acute aquatic toxicity (Category 2)</p> <p><u>GHS Health and Environmental Hazards</u></p> <p>Component A: Irritant to eyes and skin</p> <p>Component B: Irritant to eyes and skin</p> <p>Component C: Irritant to eyes and skin</p> <p>Component D: Irritant to eye and skin</p> <p>Component E: Irritant to eyes and skin</p> <p>Component F: Harmful by ingestion, irritant, toxic by skin absorption</p> <p><u>GHS Signal Words:</u></p> <p>Component A: Warning</p> <p>Component B: Warning</p> <p>Component C: Warning</p> <p>Component D: Warning</p> <p>Component E: Warning</p> <p>Component F: Danger</p>			

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GHS Hazard Statements:

Component A: H227 Combustible liquid
 Component B: H227 Combustible liquid
 Component C: H303 May be harmful if swallowed
 Component D: H303 May be harmful if swallowed
 Component E: H227 Combustible liquid
 Component F: H302 Harmful if swallowed, H311 Toxic in contact with skin, H315 Causes skin irritation, H319 Causes serious eye irritation, H335 May cause respiratory irritation, H401 Toxic to aquatic life

GHS Precautionary Statements:

Component A: - None
 Component B: - None
 Component C: - None
 Component D: - None
 Component E: - None
 Component F: P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P280: Wear protective gloves/clothing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312: Call a POISON CENTER or doctor/physician if you feel unwell.

HMIS Classification:

Component A:	Component B:	Component C:	Component D:	Component E:	Component F:
Health hazard: 0	Health hazard: 0	Health hazard: 0	Health hazard: 0	Health hazard: 0	Health hazard: 2
Flammability: 2	Flammability: 2	Flammability: 0	Flammability: 0	Flammability: 2	Flammability: 3
Physical hazards: 0	Physical hazards: 0	Physical hazards: 0	Physical hazards: 0	Physical hazards: 0	Physical hazards: 3

NFPA Rating:

Component A:	Component B:	Component C:	Component D:	Component E:	Component F:
Health hazard: 0	Health hazard: 0	Health hazard: 0	Health hazard: 0	Health hazard: 0	Health hazard: 2
Fire: 2	Fire: 2	Fire: 0	Fire: 0	Fire: 2	Fire: 3
Reactivity hazard: 0	Reactivity hazard: 0	Reactivity hazard: 0	Reactivity hazard: 0	Reactivity hazard: 0	Reactivity hazard: 3

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	Proprietary (contains 0.1% of Brij-35)	NA
Component D	Proprietary	NA
Component E	Contains DMSO	67-68-5
Component F	Proprietary	N/A

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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: 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 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 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 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**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>Component C and D: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.</p> <p>Component F: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.</p>
<i>Special firefighting procedures:</i>	<p>Component A, B and E: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.</p> <p>Component C, D and F: Wear self-contained breathing apparatus (SCBA) if necessary.</p>
<i>Unusual fire and explosions hazards:</i>	<p>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.</p> <p>Component C and D: Not applicable</p> <p>Component F: Hazardous carbon oxides, sodium oxides and sulphur oxides formed under fire conditions.</p>

6. Accidental Release Measures

<i>Containment and spill response</i>	<p>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.</p> <p>Component C and D: Keep in suitable, closed containers for disposal. Do not let material enter drains.</p> <p>Component F: Contain spillage and collect with an electrically protected vacuum cleaner or wet brush. Keep in suitable, closed container for disposal. Do not let material enter drains.</p>
<i>PPE</i>	Use personal protective equipment

7 . Handling and Storage

Component A, B and E:

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

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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. Storage under a nitrogen blanket has been recommended.

Component C and D:

Handling: Avoid contact with skin and eyes.

Storage: Keep container tightly closed in a dry and well-ventilated place.

Component F:

Handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Take measures to prevent the buildup of electrostatic charge.

Storage: Store in a tightly closed container in a dry, well-ventilated area.

8. Exposure Controls / Personal Protection

<i>Engineering controls</i>	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. Component C and D: Not applicable.
<i>PPE</i>	Components A, B, 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. Components C and D: <i>Respiratory System:</i> Respiratory protection is not required. <i>Skin and Body:</i> Wear appropriate work uniform or laboratory coat. <i>Hands:</i> Use gloves. Appropriate techniques should be used to remove potentially contaminated gloves. <i>Eyes:</i> Wear chemical splash goggles.

9. Physical and Chemical Properties

<i>Physical State</i>	Liquid
<i>Odo</i>	Not determined
<i>Solubility in Water</i>	Soluble
<i>Specific Gravity</i>	Not determined
<i>pH</i>	Component C -7.5 Component D -6.5
<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

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<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 Component C: N/A Component D: N/A Component E: PV6210000 Component F: N/A
<i>Toxicity</i>	<i>Components A, Component B and Component E contain DMSO.</i> <i>For DMSO</i> 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>Components C and D:</i> Oral LD50 - rat - 3,000 mg/kg Inhalation LC50 - rat - 1 h - > 42,000 mg/m3 Dermal LD50 - rabbit - > 10,000 mg/kg Skin - rabbit - Mild skin irritation - 24 h Eyes - rabbit - Mild eye irritation - Draize Test <i>Component F</i> LD50 Oral – rat - 1,288 mg/kg LC50 Inhalation – rat – 1 h - >3,900 mg/m3 LD50 Dermal – rabbit - 580 mg/kg
<i>Health Hazards</i>	<i>No data available</i>
<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> Toxic if absorbed through skin. Causes 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>	

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

Components C and D

Toxicity

Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 186 mg/l - 96 h

LC50 - Lepomis macrochirus (Bluegill) - 1,294.6 mg/l - 96 h

NOEC - Pimephales promelas (fathead minnow) - 4,000 mg/l - 7 d

Toxicity to daphnia and other aquatic invertebrates.

NOEC - Daphnia - 1,500 mg/l - 7 d

LC50 - Daphnia magna (Water flea) - 1,661 mg/l - 48 h

Component F

Toxicity

Toxicity to fish mortality NOEC - Oncorhynchus mykiss (rainbow trout) - 19.5 mg/l - 96 h

mortality LOEC - Pimephales promelas (fathead minnow) - 4.6 mg/l - 8 d

LC50 - Oncorhynchus mykiss (rainbow trout) - 3.6 mg/l - 96 h

Toxicity to algae Growth inhibition LOEC - Pseudokirchneriella subcapitata - 2.68 mg/l - 6 d

Components A, B, C, D and E

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 F

Persistence and degradability

No data available

Bioaccumulative potential

Bioaccumulation Cyprinus carpio (Carp) - 72 h

Bioconcentration factor (BCF): 3.9 - 5.3

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

13. Disposal Considerations

For Components A, B, 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.

Components C and D

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

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14. Transport Information: IATA Exempted quantities labeling	
<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

<u>15. Regulatory information</u>		
California Proposition 65:	N/A	
US TSCA (Toxic Substance Control Act):	Component A : Listed Component B : Listed Component C : Listed Component D : Listed Component E : Listed Component F : 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 : N/A Component E : 261.33 8(d). Component F : Not listed	
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: N/A Component D SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: N/A Component E SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard Component F SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Fire Hazard, Acute Health Hazard, Chronic Health Hazard	
US Clean Air Act:	Component A, B, C, D, E and F <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, D, E and F Listed under "Hazardous Substances": Not listed <i>Listed under "Priority Pollutants": Not listed</i> Listed under "Toxic Pollutants": Not listed	

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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	Pennsylvania Revision Date 2007-03-01	N/A	NA	Pennsylvania Revision Date 2007-03-01	Pennsylvania Revision Date N/A
New Jersey Revision Date 2007-03-01	New Jersey Revision Date 2007-03-01	N/A	NA	New Jersey Revision Date 2007-03-01	New Jersey Revision Date N/A
<i>Massachusetts</i> N/A	<i>Massachusetts</i> N/A	N/A	NA	<i>Massachusetts</i> N/A	<i>Massachusetts</i> N/A

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	N/A	200-664-3	N/A
<i>EC Risk statements</i>	36/37/38	36/37/38	N/A	NA	36/37/38	36/37/38- 36/38-22-11- 21/22-42-41- 20/21/22
<i>WGK</i>	1	1	1	1	1	2
<i>Canada-DSL/NDL</i>	Listed	Listed	NA	NA	Listed	Listed
<i>Canada-WHMIS classification</i>	D2B	D2B	NA	NA	D2B	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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