## Safety Data Sheet (SDS)

**Revision Number:** 1.0  
**Last updated:** May 2015

### 1. Product and Company Identification

<table>
<thead>
<tr>
<th><strong>Product Name:</strong></th>
<th>SensoLyte® 520 Acetylcholinesterase Assay Kit <em>Fluorimetric</em></th>
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| **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-72242 |
| **Unit Size** | 1 kit |

### 2. Hazards Identification

**Emergency Overview:**

**GHS Hazard Classification:**

**GHS Physical Hazards**

- Component A: Flammable liquid (Category 4)
- Component B: Skin irritation (Category 3), Eye irritation (Category 2B)
- Component C: Flammable liquid (Category 4)
- Component D: Skin irritation (Category 3), Eye irritation (Category 2A)
- Component E: Acute toxicity (Category 2), Skin irritation (Category 2A), Eye irritation (Category 2A)

**GHS Health and Environmental Hazards**

- Component A: Irritant to eyes and skin
- Component B: Irritant to eyes and skin
- Component C: Irritant to eyes and skin
- Component D: Irritant to eyes and skin
- Component E: Acute toxicity (Category 2)

**GHS Signal Words:**

- Component A: Warning
- Component B: Warning
- Component C: Warning
- Component D: Warning
- Component E: Danger

**GHS Hazard Statements:**

- Component A: H227 Combustible liquid
- Component B: H316 Causes mild skin irritation, H320 Causes eye irritation. H335 May
cause respiratory irritation.
Component C: H227 Combustible liquid
Component D: H316 Causes mild skin irritation, H320 Causes eye irritation. H335 May cause respiratory irritation
Component E: H300+H310 Fatal if swallowed or in contact with skin
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation

GHS Precautionary Statements:
Component A: - None
Component B: - None
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. P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
Component D: P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
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 E: P264 Wash skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P280 Wear protective gloves/eye protection/face protection
P301+P310 IF SWALLOWED: immediately call a POISON CENTER or doctor/physician
P330 Rinse mouth
P403+P233 Store in well-ventilated place. Keep container tightly closed.
P405 Store locked up
P501 Dispose of contents/container to an approved waste disposal plant

HMIS Classification:

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<tr>
<th>Component A:</th>
<th>Component B:</th>
<th>Component C:</th>
<th>Component D:</th>
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NFPA Rating:

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3. Composition / Information on Ingredients

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<th>Ingredients/Components:</th>
<th>Chemical Name</th>
<th>Description</th>
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<td>Contains DMSO</td>
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<td>Component B</td>
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<td>Component D</td>
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<tr>
<td>Component E</td>
<td>Neostigmine bromide</td>
<td>114-80-7</td>
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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
Consult physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
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.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. Fire Fighting Measures
### Extinguishing media:
- **Component A, C**: For small fires, use dry chemical, or carbon dioxide. For large fires, use water spray from a safe distance.
- **Component B, D, and E**: Use water spray, dry chemical or carbon dioxide.

### Special firefighting procedures:
- **Component A, C**: Fire fighters should wear positive pressure self-contained breathing apparatus and full turnout gear.
- **Component B, D, and E**: Wear self-contained breathing apparatus if necessary.

### Unusual fire and explosions hazards:
- **Component A, C**: 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 E**: Hazardous Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide formed under fire conditions.

### 6. Accidental Release Measures

#### Containment and spill response
- **Component A and C**: 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.
- **Component E**: Wear respiratory protection. Avoid dust formation. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

#### PPE
- Use personal protective equipment

### 7. Handling and Storage

#### Component A, C:
- **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. Storage under a nitrogen blanket has been recommended.

#### Component B, D, and E:
- **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 A, C, E**: Facilities storing and using this material should be equipped with a safety shower and eyewash station. Adequate ventilation should also be present.
- **Component B and D**: Not applicable
Components A, B, C, D, and E:

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. Handle in gloves.

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, Component E

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<td>Physical State</td>
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<td>Odor</td>
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<td>Solubility in Water</td>
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<td>Specific Gravity</td>
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<td>pH</td>
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<td>Boiling Point</td>
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<td>Melting Point</td>
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<td>Flash Point</td>
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<tr>
<td>Vapor Pressure</td>
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<tr>
<td>Vapor Density</td>
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</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 A: PV6210000 Component B: N/A Component C: PV6210000 Component D: N/A Component E: BR3150000

Toxicity: Component A, Component C 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 E, Contains 1,10-Phenanthroline
- LD50 Oral-rat-132 mg/kg
- Component C and Component D
- Not Applicable
<table>
<thead>
<tr>
<th><strong>Health Hazards</strong></th>
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<tbody>
<tr>
<td><strong>Potential Hazards</strong></td>
<td><strong>Potential Health Effects</strong></td>
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<tr>
<td><em>Inhalation:</em> May be harmful if inhaled. Causes respiratory tract irritation.</td>
<td></td>
</tr>
<tr>
<td><em>Ingestion:</em> Harmful if swallowed.</td>
<td></td>
</tr>
<tr>
<td><em>Skin:</em> May be harmful if absorbed through skin. May cause skin irritation.</td>
<td></td>
</tr>
<tr>
<td><em>Eyes:</em> Causes eye irritation.</td>
<td></td>
</tr>
<tr>
<td><strong>Aggravated Medical Condition:</strong> 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.</td>
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<tr>
<td><strong>Carcinogenicity:</strong></td>
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<tr>
<td><strong>OSHA Permissible Exposure Limit (PEL) Data</strong></td>
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<tr>
<td><strong>ACGIH Threshold Limit Values (TLV)</strong></td>
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### 12. Ecological Information

*For Dimethyl sulfoxide (DMSO) CAS-No. 67-68-5 (Component A and C 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 B, D and E*

No data available

*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

### 13. Disposal Considerations

*For Components A, B, C, D, and E*

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: IATA Exempted quantities labeling

<table>
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<tr>
<th><strong>UN Number</strong></th>
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<td><strong>Packing Group</strong></td>
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<tr>
<td><strong>Proper Shipping Name (DOT)</strong></td>
<td>Toxic liquid, organic, contains Neostigmine bromide</td>
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### 15. Regulatory information

<table>
<thead>
<tr>
<th>California Proposition 65</th>
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| **US TSCA (Toxic Substance Control Act)** | Component A: Listed  
Component B: N/A  
Component C: Listed  
Component D: N/A  
Component E: Listed |
Component B:  
Component C: 261.33 8(d).  
Component D: N/A  
Component E: N/A |
| **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  
Component C  
SARA 302 components: N/A  
SARA 313 components: N/A  
SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard  
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: Acute health hazards, Chronic Health Hazard |
| **US Clean Air Act** | Component A, B, C, D, and E  
Listed under Hazardous Air Pollutants: Not listed  
Listed under Class 1 Ozone Depletors: Not listed  
Listed under Class 2 Ozone Depletors: Not listed |
| **US Clean Water Act** | Components A, B, C, D, and E  
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:

<table>
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### European/International Regulations:

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### 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.