# Safety Data Sheet (SDS)

**Revision Number:** 1.1  
**Last updated:** April 2015

## 1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>SensoLyte® OPA Protein Quantitation Kit</th>
</tr>
</thead>
</table>
| 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-71015 |
| Unit Size | 1 kit |

## 2. Hazards Identification

### Emergency Overview:

### GHS Hazard Classification:

#### GHS Physical Hazards

- Component A: Corrosive
- Component B: Corrosive (Category 1B)
- Component C: Reproductive toxicity (Category 1B)
- Component D: Not Applicable

#### GHS Health and Environmental Hazards

- Component A: Toxic by ingestion, Skin sensitizer, Corrosive
- Component B: Skin corrosion, Serious eye damage
- Component C: Irritant to eyes and skin, Reproductive toxicity, target organs- testes
- Component D: Not Applicable

### GHS Signal Words:

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

### GHS Hazard Statements:

- Component A: H301 Toxic if swallowed.  
  H313 May be harmful in contact with skin.  
  H314 Causes severe skin burns and eye damage.  
  H317 May cause an allergic skin reaction.  
  H400 Very toxic to aquatic life.

- Component B: H301 Toxic if swallowed.  
  H314 Causes severe skin burns and eye damage.
GHS Precautionary Statements:

Component A: P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/ physician.

Component B: P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/ physician.

Component C: P201 Obtain special instructions before use. P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Component D: P280 Wear Eye Protection

HMIS Classification:

<table>
<thead>
<tr>
<th>Component A:</th>
<th>Component B:</th>
<th>Component C:</th>
<th>Component D:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazard: 3</td>
<td>Health hazard: 3</td>
<td>Health hazard: 2</td>
<td>Health hazard: 1</td>
</tr>
<tr>
<td>Flammability: 1</td>
<td>Flammability: 1</td>
<td>Flammability: 0</td>
<td>Flammability: 0</td>
</tr>
<tr>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
<td>Physical hazards: 0</td>
</tr>
</tbody>
</table>

NFPA Rating:

<table>
<thead>
<tr>
<th>Component A:</th>
<th>Component B:</th>
<th>Component C:</th>
<th>Component D:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazard: 3</td>
<td>Health hazard: 3</td>
<td>Health hazard: 2</td>
<td>Health hazard: 0</td>
</tr>
<tr>
<td>Fire: 1</td>
<td>Fire: 1</td>
<td>Fire: 0</td>
<td>Fire: 0</td>
</tr>
<tr>
<td>Reactivity hazard: 0</td>
<td>Reactivity hazard: 0</td>
<td>Reactivity hazard: 0</td>
<td>Reactivity hazard: 0</td>
</tr>
</tbody>
</table>

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredients/Components:</th>
<th>Description</th>
<th>CAS Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component A</td>
<td>Contains OPA</td>
<td>643-79-8</td>
</tr>
<tr>
<td>Component B</td>
<td>Proprietary</td>
<td>NA</td>
</tr>
<tr>
<td>Component C</td>
<td>Proprietary</td>
<td>NA</td>
</tr>
<tr>
<td>Component D</td>
<td>Contains BSA</td>
<td>NA</td>
</tr>
</tbody>
</table>
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:* Take off contaminated clothing and shoes immediately. 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. Continue rinsing eyes during transport to hospital.

**Component B**
*Inhalation:* If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
*Skin:* Take off contaminated clothing and shoes immediately. 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. Continue rinsing eyes during transport to hospital.
*Ingestion:* Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Component C**
*Inhalation:* If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
*Skin:* Wash off with soap and plenty of water. Consult a physician.
*Eyes:* Flush eyes with water as a precaution.
*Ingestion:* Never give anything by mouth to an unconscious person. Rinse mouth with water. 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.

5. Fire Fighting Measures
### Extinguishing media:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Component A</strong></td>
<td>Not flammable or combustible.</td>
</tr>
<tr>
<td><strong>Component B</strong></td>
<td>Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide</td>
</tr>
<tr>
<td><strong>Component C</strong></td>
<td>Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.</td>
</tr>
<tr>
<td><strong>Component D</strong></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### Special firefighting procedures:

Wear self-contained breathing apparatus for firefighting if necessary.

### Unusual fire and explosions hazards:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Component A</strong></td>
<td>Hazardous decomposition products formed under fire conditions. - Carbon oxides</td>
</tr>
<tr>
<td><strong>Component B</strong></td>
<td>Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides</td>
</tr>
<tr>
<td><strong>Component C</strong></td>
<td>Avoid breathing dust. 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 decomposition products formed under fire conditions. - Borane/boron oxides</td>
</tr>
<tr>
<td><strong>Component B</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

### 6. Accidental Release Measures

**Containment and spill response**

**Component A**:
- Personal precautions
  - Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
  - Environmental precautions
  - Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Component B**:
- Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Component C**:
- Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**Component D**: Not applicable.

**PPE**

Gloves, safety goggles, complete suit protecting against chemicals.

### 7. Handling and Storage

**Component A**

*Handling*: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.


**Component B**

*Handling*: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Normal measures for preventive fire protection.
**Storage:** Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas

**Component C:**

**Handling:** Avoid inhalation of vapor or mist.

Normal measures for preventive fire protection

**Storage:** Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**Component D:** Not applicable

### 8. Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Engineering controls</th>
<th>Facilities storing and using this material should be equipped with a safety shower and eyewash station. Adequate ventilation should also be present.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PPE</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Component A Skin and Body:** Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hands:** Use chemical resistant, impervious gloves. Appropriate techniques should be used to remove potentially contaminated gloves.

**Eye:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Component B Respiratory System:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.

**Skin and Body:** Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hands:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eyes:** Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Component C:**

**Respiratory System:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Skin and Body:** impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Eyes: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Component D: Not applicable

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Not determined</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH</td>
<td>Component C: pH-9.5</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Component B: 110 - 111 °C (230 - 232 °F)</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Component B: Melting point/range: 15 - 18 °C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Component B: 93.4 °C (200.1 °F) - closed cup</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Components: Stable under recommended storage conditions.

Dangerous Products of Decomposition

Component A: Hazardous decomposition products formed under fire conditions. - Carbon oxides
Component B: Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides
Other decomposition products - no data available
Component C - Borane/boron oxides
Other decomposition products - no data available
Component D: NA

Dangerous Reactions
Not Applicable

11. Toxicological Information

RTECS Number

Component A: For OPA, TH6950000
Other components: Not Applicable

Toxicity

Component A
Acute toxicity
Oral LD50
LD50 Oral - rat - 178 mg/kg Sigma-Aldrich - P0657
Inhalation LC50
no data available
Dermal LD50
LD50 Dermal - rat - > 2,000 mg/kg
Other information on acute toxicity
### Health Hazard:

**Component A, B and C:**

- **Inhalation:** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
- **Ingestion:** Toxic if swallowed.
- **Skin:** May be harmful if absorbed through skin. Causes skin burns.
- **Eyes:** Causes eye burns.

**Component D:** Not Applicable

#### Potential Hazards

<table>
<thead>
<tr>
<th>Components A, B and C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inhalation:</strong> May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.</td>
</tr>
<tr>
<td><strong>Skin:</strong> May be harmful if absorbed through skin. Causes skin burns.</td>
</tr>
<tr>
<td><strong>Eyes:</strong> Causes eye burns.</td>
</tr>
</tbody>
</table>

### Carcinogenicity:

None

### OSHA Permissible Exposure Limit (PEL) Data

No data available

### ACGIH Threshold Limit Values (TLV)

No data available

### 12. Ecological Information

#### Component A:

**Toxicity**

- Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 0.072 mg/l - 96.0 h
- Toxicity to daphnia and other aquatic invertebrates
- EC50 - Daphnia magna (Water flea) - 0.087 mg/l - 48 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

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

**Very toxic to aquatic life.**

**Other Components:** No data available

### 13. Disposal Considerations
**All Components**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. **Transport Information:**

<table>
<thead>
<tr>
<th><strong>UN Number</strong></th>
<th>3316</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hazard Class</strong></td>
<td>9</td>
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<tr>
<td><strong>Identification Number</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Packing Group</strong></td>
<td>II</td>
</tr>
<tr>
<td><strong>Proper Shipping Name (DOT)</strong></td>
<td>Chemical Kit</td>
</tr>
</tbody>
</table>
15. Regulatory information

<table>
<thead>
<tr>
<th>California Proposition 65:</th>
<th>None</th>
</tr>
</thead>
</table>
| US TSCA (Toxic Substance Control Act): | Component A: Listed  
Component B: Listed  
Component C: Listed  
Component D: Not listed |
| US CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act): | Component A : Listed  
Component B : Listed  
Component C : Not Listed  
Component D : Not listed |
| US SARA Title III | Component A  
SARA 302 components: N/A  
SARA 313 components: N/A  
SARA 311/312 Hazards: Chronic Health Hazard  
Component B  
SARA 302 components: N/A  
SARA 313 components: N/A  
SARA 311/312 Hazards: Acute 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: N/A |
| 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, and D  
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>
<thead>
<tr>
<th>Component A:</th>
<th>Component B:</th>
<th>Component C:</th>
<th>Component D:</th>
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</thead>
<tbody>
<tr>
<td>Pennsylvania Revision Date</td>
<td>Pennsylvania Revision Date</td>
<td>Pennsylvania Revision Date 2009-07-17</td>
<td>N/A</td>
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<tr>
<td>New Jersey Revision Date</td>
<td>New Jersey Revision Date</td>
<td>New Jersey Revision Date 2009-07-17</td>
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</table>

**European/International Regulations:**

<table>
<thead>
<tr>
<th>Component A</th>
<th>Component B</th>
<th>Component C</th>
<th>Component D</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC EINICS 210-935-8</td>
<td>203-537-0</td>
<td>233-139-2</td>
<td>N/A</td>
</tr>
<tr>
<td>EC Risk statements R52/53</td>
<td>R25/R34</td>
<td>R36/38</td>
<td>N/A</td>
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<tr>
<td>WGK</td>
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<tr>
<td><strong>Canada-DSL/NDSL</strong></td>
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<tr>
<td><strong>Canada-</strong></td>
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<tr>
<td><strong>WHMIS classification</strong></td>
<td>D2A</td>
<td>B3</td>
<td>D2A</td>
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<tr>
<td><strong>Canada-</strong></td>
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</tr>
<tr>
<td><strong>Canadian Ingredient</strong></td>
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<td>Not Listed</td>
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<tr>
<td><strong>Disclosure List</strong></td>
<td></td>
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</tbody>
</table>

### 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.