

# Safety Data Sheet (SDS)

<i>Revision Number: 1.2</i>	<i>Last updated: April 2015</i>
<b>1. Product and Company Identification</b>	
<i>Product Name:</i>	<b>SensoLyte<sup>®</sup> pNPP Protein Phosphatase Assay Kit *Colorimetric*</b>
<i>Manufacturer/Supplier:</i>	AnaSpec, Inc. <a href="http://www.anaspec.com">www.anaspec.com</a> 34801 Campus Drive Fremont, CA 94555 Tel: 510-791-9560 Fax: 510-791-9572 Email: <a href="mailto:service@anaspec.com">service@anaspec.com</a>
<i>Catalog Number</i>	AS-71105
<i>Unit Size</i>	1 kit
<b>2. Hazards Identification</b>	
<i>Emergency Overview:</i>	
<i>GHS Hazard Classification:</i>	
<i>GHS Physical Hazards</i>	
<p>Component A: N/A</p> <p>Component B and C: Skin irritation (Category 2), Eye irritation (Category 2A), Specific target organ toxicity - single exposure (Category 3), Acute toxicity, Oral (Category 5), Acute aquatic toxicity (Category 3)</p> <p>Component D: Acute toxicity, Oral (Category 4), Skin irritation (Category 3), Serious eye damage (Category 1), Acute aquatic toxicity (Category 2), Chronic aquatic toxicity (Category 2)</p> <p>Component E: Skin corrosion (Category 1A), Serious eye damage (Category 1), Acute aquatic toxicity (Category 3)</p> <p>Component F: Acute toxicity, Oral (Category 4), Skin irritation (Category 2), Eye irritation (Category 2A), Specific target organ toxicity - single exposure (Category 3)</p>	
<i>GHS Health and Environmental Hazards</i>	
<p>Component A, B and C: Irritant to eyes, skin and respiratory system.</p> <p>Component D: Irritant to eyes, skin and respiratory system. Cause eye damage</p> <p>Component E: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if absorbed through skin. Causes skin burns. Causes severe eye burns. May be harmful if swallowed.</p> <p>Component F: Irritant to eyes, skin and respiratory system. Harmful if swallow.</p>	
<i>GHS Signal Words:</i>	
<p>Component A, C and F: Warning</p> <p>Component B, D and E: Danger</p>	
<i>GHS Hazard Statements:</i>	
<p>Component A: None</p> <p>Component B: H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H302 Harmful if swallowed. H318 Causes serious eye</p>	

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- damage. H401 Toxic to aquatic life.
- Component C: H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H303 May be harmful if swallowed. H402 Harmful to aquatic life.
- Component D: H302 Harmful if swallowed. H316 Causes mild skin irritation. H318 Causes serious eye damage. H411 Toxic to aquatic life with long lasting effects.
- Component E: H314 Causes severe skin burns and eye damage. H402 Harmful to aquatic life.
- Component F: H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.

**GHS Precautionary Statements:**

- Component A: None
- Component B: P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ 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. P280 Wear protective gloves/ eye protection/ face protection.
- Component C: P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ 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. P264 Wash skin thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection. P312 Call a POISON CENTER or doctor/ physician if you feel unwell. P337 + P313 If eye irritation persists: Get medical advice/ attention. P501 Dispose of contents/ container to an approved waste disposal plant.
- Component D: P273 Avoid release to the environment. P280 Wear protective gloves/ 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.
- Component E: 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 F: 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.

**HMIS Classification:**

<b>Component A:</b>	<b>Component B:</b>	<b>Component C:</b>	<b>Component D:</b>	<b>Component E:</b>	<b>Component F:</b>
<i>Health hazard: 0</i>	<i>Health hazard: 2</i>	<i>Health hazard: 1</i>	<i>Health hazard: 2</i>	<i>Health hazard: 3</i>	<i>Health hazard: 2</i>
<i>Flammability: 0</i>	<i>Flammability: 0</i>	<i>Flammability: 0</i>	<i>Flammability: 1</i>	<i>Flammability: 0</i>	<i>Flammability: 1</i>
<i>Physical hazards: 0</i>	<i>Physical hazards: 0</i>	<i>Physical hazards: 0</i>	<i>Physical hazards: 0</i>	<i>Physical hazards: 1</i>	<i>Physical hazards: 0</i>

**NFPA Rating:**

<b>Component A:</b>	<b>Component B:</b>	<b>Component C:</b>	<b>Component D:</b>	<b>Component E:</b>	<b>Component F:</b>
<i>Health hazard: 0</i>	<i>Health hazard: 2</i>	<i>Health hazard: 1</i>	<i>Health hazard: 2</i>	<i>Health hazard: 3</i>	<i>Health hazard: 2</i>
<i>Fire: 0</i>	<i>Fire: 0</i>	<i>Fire: 0</i>	<i>Fire: 1</i>	<i>Fire: 0</i>	<i>Fire: 1</i>
<i>Reactivity hazard: 0</i>	<i>Reactivity hazard: 0</i>	<i>Reactivity hazard: 0</i>	<i>Reactivity hazard: 0</i>	<i>Reactivity hazard: 1</i>	<i>Reactivity hazard: 0</i>

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**3. Composition / Information on Ingredients***Ingredients/Components:*

<i>Chemical Name:</i>	<i>Description</i>	<i>CAS Number:</i>
Component A	Contains pNPP	4264-83-9
Component B	Proprietary	N/A
Component C	Proprietary	N/A
Component D	Contains Triton X-100	9002-93-1
Component E	Contains sodium hydroxide	1310-73-2
Component F	Contains DTT	16096-97-2

**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 inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

*Ingestion:* Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

*Skin:* Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Cold water may be used.

*Eyes:* Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

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

**Component C**

*Inhalation:* If breathed in, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

*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.

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*Skin:* Take off contaminated clothing and shoes immediately. 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. Continue rinsing eyes during transport to hospital.

#### **Component F**

*Inhalation:* If breathed in, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

*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**

<i>Extinguishing media:</i>	<p><b>Component A:</b> SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.</p> <p><b>Component B, C, D, F:</b> Use water spray, dry chemical or carbon dioxide.</p> <p><b>Component E:</b> Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.</p>
<i>Special firefighting procedures:</i>	<p><b>Component A:</b> Wear self-contained breathing apparatus for fire fighting if necessary.</p> <p><b>Component B, C, D, E, F:</b> Wear self-contained breathing apparatus for fire fighting if necessary.</p>
<i>Unusual fire and explosions hazards:</i>	<p><b>Component A:</b> N/A</p> <p><b>Component B:</b> Carbon oxides, nitrogen oxides (NO<sub>x</sub>) formed under fire conditions.</p> <p><b>Component D:</b> Carbon oxides formed under fire conditions.</p> <p><b>Component C:</b> Carbon oxides, nitrogen oxides (NO<sub>x</sub>), hydrogen chloride gas, sodium oxides formed under fire conditions.</p> <p><b>Component E:</b> Sodium oxides formed under fire conditions.</p> <p><b>Component F:</b> Carbon oxides, Sulphur oxides formed under fire conditions.</p>

### **6. Accidental Release Measures**

<i>Containment and spill response</i>	<p><b>Component A:</b> Small spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. Large spill: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.</p> <p><b>Component B, C, D, E, F:</b> Keep in suitable, closed containers for disposal.</p>
<i>PPE</i>	Use personal protective equipment

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**7. Handling and Storage****Component A:**

*Handling:* Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

*Storage:* Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 0°C (32°F). Freeze

**Component B, C, E, F:**

Avoid contact with skin and eyes. Provide appropriate exhaust ventilation. Normal measures for preventive fire protection. Keep container tightly closed in a dry and well-ventilated place.

**Component D:**

*Handling:* Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

*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.

**8. Exposure Controls / Personal Protection***Engineering controls***Component A:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Component B, E:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.

**Component C and F:** Not applicable

**Component D:** 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.

*PPE***All components:**

*Respiratory System:* Wear proper respirator or mask.

*Skin and Body:* Wear appropriate work uniform or laboratory coat to prevent skin exposure.

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

*Eyes:* Wear chemical splash goggles.

**9. Physical and Chemical Properties***Physical State*

Liquid

*Odor*

Not determined

*Solubility in Water*

Soluble

*Specific Gravity*

Not determined

*pH*

Component B 6.5  
Component C 7.5  
Component D: 9.7  
Component E: 14  
Component F: 4 - 6 at 15.4 g/l at 25 °C

*Boiling Point*

Not determined

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<i>Melting Point</i>	Not determined
<i>Flash Point</i>	Not determined
<i>Vapor Pressure:</i>	Not determined
<i>Vapor Density:</i>	Not determined
<b><u>10. Stability and Reactivity</u></b>	
<i>Thermal Decomposition</i>	Not applicable
<i>Dangerous Products of Decomposition</i>	Not applicable
<i>Dangerous Reactions</i>	Not applicable
<b><u>11. Toxicological Information</u></b>	
<i>RTECS Number</i>	Component A, B and C: N/A Component D: MD0907700 Component E: WB4900000 Component F: EK1610000
<i>Toxicity</i>	<b>Component A, B and C:</b> No data available <b>Component D:</b> Acute toxicity Oral LD50 LD50 Oral - rat - 1,800 mg/kg Inhalation LC50 no data available Dermal LD50 LD50 Dermal - rabbit - 8,000 mg/kg Other information on acute toxicity no data available <b>Component E:</b> Acute toxicity Oral LD50 no data available Inhalation LC50 no data available Dermal LD50 no data available Other information on acute toxicity no data available <b>Component F:</b> LD50 Oral-rat-400 mg/kg
<i>Health Hazards</i>	No data available
<i>Potential Hazards</i>	<b>Potential Health Effects</b> Component A: <i>Inhalation:</i> Inhalation of dust may cause respiratory tract irritation. <i>Ingestion:</i> Expected low hazard. May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea. The toxicological properties of this material have not been fully investigated. <i>Skin:</i> May cause skin irritation. <i>Eyes:</i> Dust may cause eye irritation. Component B, C, D:

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	<p><i>Inhalation:</i> May be harmful if inhaled. Causes respiratory tract irritation.</p> <p><i>Ingestion:</i> May be harmful if swallowed.</p> <p><i>Skin:</i> May be harmful if absorbed through skin. Causes skin irritation.</p> <p><i>Eyes:</i> Causes eye irritation.</p> <p>Component E:</p> <p><i>Inhalation:</i> May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.</p> <p><i>Ingestion:</i> May be harmful if swallowed.</p> <p><i>Skin:</i> May be harmful if absorbed through skin. Causes skin burns.</p> <p><i>Eyes:</i> Causes eye burns. Causes severe eye burns.</p> <p>Component F:</p> <p><i>Inhalation:</i> May be harmful if inhaled. Causes respiratory tract irritation.</p> <p><i>Ingestion:</i> Toxic if swallowed.</p> <p><i>Skin:</i> May be harmful if absorbed through skin. Causes skin irritation.</p> <p><i>Eyes:</i> Causes eye irritation.</p>
<i>Carcinogenicity:</i>	No data available
<i>OSHA Permissible Exposure Limit(PEL) Data</i>	Component A, B, C, D and F: No data available Component E: 2mg/m <sup>3</sup>
<i>ACGIH Threshold Limit Values (TLV)</i>	Component A, B, C, D and F: No data available Component E: 2mg/m <sup>3</sup>

## **12. Ecological Information**

**Component A, B and C:** No data available

**Component D:**

**Toxicity** no data available

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia - 26 mg/l - 48 h

Persistence and degradability

Biodegradability Biotic/Aerobic Biochemical oxygen demand

Result: 36 % - Not readily biodegradable.

Method: Closed Bottle test

**Other adverse effects**

Chemical Oxygen Demand (COD) 2.19 mg/g

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

Toxic to aquatic life with long lasting effects.

**Component E:**

**Toxicity**

Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 125 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

Immobilization EC50 - Daphnia - 40.38 mg/l - 48 h

**Component F:**

Do not allow product to reach ground water.

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**13. Disposal Considerations****Component A, B, C, D**

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

**Component E, F**

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:**

<i>UN Number</i>	3316
<i>Hazard Class</i>	9
<i>Packing Group</i>	III
<i>Proper Shipping Name (DOT)</i>	Chemical kit

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<b>15. Regulatory information</b>	
California Proposition 65:	N/A
US TSCA (Toxic Substance Control Act)	<b>Component A, D, E and F:</b> Listed <b>Component B and C:</b> N/A
US CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)	<b>Component A, B, C, D and F:</b> N/A <b>Component E:</b> 1000 lb final RQ; 454 kg final RQ
US SARA Title III	<b>Component A</b> SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: No SARA hazards <b>Component B, C and F</b> SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: N/A <b>Component D and E</b> SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Acute Health hazard
US Clean Air Act	<b>All components</b> Listed under “Hazardous Substances”: Not listed Listed under “Priority Pollutants”: Not listed Listed under “Toxic Pollutants”: Not listed
US Clean Water Act	<b>Component A, B, C, D, F</b> Listed under “Hazardous Substances”: Not listed Listed under “Priority Pollutants”: Not listed Listed under “Toxic Pollutants”: Not listed <b>Component E</b> Listed under “Hazardous Substances”: 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 N/A 4264-83-9	Pennsylvania Revision Date N/A 6976-37-0	Pennsylvania Revision Date N/A 7647-14-5	Pennsylvania Revision Date N/A 9002-93-1	Pennsylvania Revision Date 2007/03/01 1310-73-2	Pennsylvania Revision Date N/A 3483-12-3
New Jersey Revision Date N/A 4264-83-9	New Jersey Revision Date N/A 6976-37-0	New Jersey Revision Date N/A 7647-14-5	New Jersey Revision Date N/A 9002-93-1	New Jersey Revision Date 2007/03/01 1310-73-2	New Jersey Revision Date N/A 3483-12-3
Massachusetts N/A	Massachusetts N/A	Massachusetts N/A	Massachusetts N/A	Massachusetts Revision Date 2007/03/01 1310-73-2	Massachusetts N/A

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<b>European/International Regulations:</b>						
	Component A:	Component B:	Component C:	Component D:	Component E:	Component F:
EC EINICS	224-246-5	230-237-7	231-598-3	255-695-5	231-659-4	222-468-7
<i>EC Risk statements</i>	36/38 36/37/38	36/37/38- 21/22- 20/21/22	36-36/37/38- 22	41-36/38-22- 51/53-36- 36/37/38- 37/38	36/38-35-34	25-36/37/38
<i>WGK</i>	1	3	1	3	1	3
<i>Canada-DSL/NDSL</i>	Listed	Listed	Listed	Listed	Listed	Listed
<i>Canada-WHMIS classification</i>	N/A	N/A	N/A	D2B	D2B	D2B, D1B
<i>Canada-Canadian Ingredient Disclosure List</i>	N/A	N/A	N/A	Listed	Listed	N/A

#### **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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