

Safety Data Sheet (SDS)

<i>Revision Number: 1.1</i>	<i>Last updated: April 2015</i>
1. Product and Company Identification	
<i>Product Name:</i>	SensoLyte[®] pNPP Alkaline Phosphatase Assay Kit *Colorimetric*
<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-72146
<i>Unit Size</i>	1 kit
2. Hazards Identification	
<i>Emergency Overview:</i>	
<i>GHS Hazard Classification:</i>	
<i>GHS Physical Hazards</i>	
<ul style="list-style-type: none"> Component A: Not flammable or combustible. Component B: Not flammable or combustible. Component C: Corrosive(Category 1A) Component D: Not flammable or combustible. Component E: Not flammable or combustible. 	
<i>GHS Health and Environmental Hazards</i>	
<ul style="list-style-type: none"> Component A: Not Applicable Component B: Irritant to eyes and skin Component C: Serious eye damage (Category 1) Component D: Irritant to eyes and skin, Acute toxicity, oral Component E: Irritant to eyes and skin 	
<i>GHS Signal Words:</i>	
<ul style="list-style-type: none"> Component A: Not applicable Component B: Not Applicable Component C: Danger Component D: Danger Component E: Not Applicable 	
<i>GHS Hazard Statements:</i>	
<ul style="list-style-type: none"> Component A: Not applicable Component B: Not applicable 	

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Component C: H314 Causes severe skin burns and eye damage
 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: Not Applicable

GHS Precautionary Statements:

Component A: - None
 Component B: - None
 Component C: - 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 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: None

HMIS Classification:

Component A:	Component B:	Component C:	Component D:	Component E:
Health hazard: 0	Health hazard: 0	Health hazard: 3	Health hazard: 2	Health hazard: 0
Flammability: 0	Flammability: 0	Flammability: 0	Flammability: 1	Flammability: 0
Physical hazards: 0	Physical hazards: 0	Physical hazards: 1	Physical hazards: 0	Physical hazards: 0

NFPA Rating:

Component A:	Component B:	Component C:	Component D:	Component E:
Health hazard: 0	Health hazard: 0	Health hazard: 3	Health hazard: 2	Health hazard: 0
Fire: 0	Fire: 0	Fire: 0	Fire: 1	Fire: 0
Reactivity hazard: 0	Reactivity hazard: 0	Reactivity hazard: 1	Reactivity hazard: 0	Reactivity hazard: 0

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

<i>Chemical Name:</i>	<i>Description</i>	<i>CAS Number:</i>
Component A	Proprietary	NA
Component B	Proprietary	NA
Component C	Proprietary	1310-73-2
Component D	Triton X-100	9002-93-1
Component E	Proprietary(contains 2 mM sodium azide)	NA

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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 inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Skin: In case of contact, immediately wash skin with soap and copious amounts of water.

Eyes: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Component B

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

Component C

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. 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 D

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

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

Component E

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

Fire Fighting Measures**AnaSpec Inc.**

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<i>Extinguishing media:</i>	Component A, B, D and E: Water, Foam, Dry chemical, CO2. Component C: Use water spray, alcohol resistant foam, dry chemical, or carbon dioxide
<i>Special firefighting procedures:</i>	Component A: Use respirator and protective clothing. Toxic fumes could be emitted when water is evaporated with fire. Component B: Not applicable Component C and D: Wear self-contained breathing apparatus (SCBA) if necessary. Component E: Not applicable
<i>Unusual fire and explosions hazards:</i>	Component A: Not applicable Component B: Not Applicable Component C: Hazardous decomposition products formed under fire conditions. - Sodium oxides Component D: Hazardous decomposition products formed under fire conditions - Carbon oxides Component E: Not Applicable

6. Accidental Release Measures

<i>Containment and spill response</i>	Component A, B and E: Contain spill, then clean up with copious amounts of soap and water. Avoid contact with skin or clothing. Component C and D: Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas
<i>PPE</i>	Use personal protective equipment

7. Handling and Storage

Component A:

Handling: User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage: Keep tightly closed. Store at 2-8°C

Component B:

Handling: 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.

Storage: Recommended storage temperature: 2 - 8 °C

Component C:

Handling: 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.

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.

Component E:

Handling: 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.

Storage: Recommended storage temperature: 2 - 8 °C

8. Exposure Controls / Personal Protection

<i>Engineering controls</i>	<p>Component A: Safety shower and eye bath. Mechanical exhaust required.</p> <p>Component B, D and E: Contains no substances with occupational exposure limit values.</p> <p>Component C: Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.</p> <p>Exposure limits</p> <p>ACGIH (United States) CEIL: 2 mg/m³</p> <p>OSHA (United States) CEIL: 2 mg/m³</p> <p>NIOSH REL (United States, 1994). CEIL: 2 mg/m³</p> <p>OSHA Final Rule (United States, 1989). CEIL: 2 mg/m³</p>
<i>PPE</i>	<p>Component A:</p> <p><i>Respiratory:</i> Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges.</p> <p><i>Hand:</i> Protective gloves.</p> <p><i>Eye:</i> Chemical safety goggles.</p> <p>Component B and E:</p> <p><i>Respiratory:</i> Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).</p> <p><i>Hand:</i> 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</p>

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good laboratory practices. Wash and dry hands.

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

Component C:

Respiratory: 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).

Hand: 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.

Eye: 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).

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.

Component D:

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).

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).

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

9. Physical and Chemical Properties

<i>Physical State</i>	Liquid
<i>Odo</i>	Not determined
<i>Solubility in Water</i>	Soluble

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<i>Specific Gravity</i>	Not determined
<i>pH</i>	Component B – 7.4 Component C - 9.7
<i>Boiling Point</i>	Component A:100 ⁰ C
<i>Melting Point</i>	Not determined
<i>Flash Point</i>	Not determined
<i>Vapor Pressure:</i>	Not determined
<i>Vapor Density:</i>	Not determined
<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: NA Component B: NA Component C: NA Component D: MD0907700 Component E: NA
<i>Toxicity</i>	Component A: Not available Component B: Not available Component C: Dermal LD50: Corrosive Oral LD50: 400 mg/kg (rabbit) LDLo [PB 234-899 1974] Inhalation LC50: Corrosive TARGET ORGANS: Skin, eyes, mucous membranes Acute effects from overexposure: Sodium hydroxide is corrosive and may produce severe eye, skin and respiratory tract irritation and upper gastrointestinal tract damage. Ingestion of concentrated solutions has caused death in animals and humans. [Gosselin, Smith & Hodge, 1984; PB 234-899 1974] Chronic effects from overexposre: Sodium hydroxide may produce inflammation of the eyes, skin, and mucous membranes. Esophageal carcinoma at the site of a chronic lye stricture has been reported. (Gosselin , Smith & Hodge 1984) Component D: Oral LD50 LD50 Oral - rat - female - 707 mg/kg LD50 Oral - rat - male - 500 mg/kg Inhalation LC50

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	<p>no data available</p> <p>Dermal LD50 LD50 Dermal - rabbit - 8,000 mg/kg</p> <p>Other information on acute toxicity no data available</p> <p>Component E: Not available</p>
<i>Health Hazards</i>	<i>No data available</i>
<i>Potential Hazards</i>	<p>Potential Health Effects</p> <p>Component A: Not available</p> <p>Component B and E: Inhalation: May be harmful if inhaled. May cause respiratory tract irritation. Ingestion: May be harmful if swallowed. Skin: May be harmful if absorbed through skin. May cause skin irritation. Eyes: May cause eye irritation</p> <p>Component C: Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Ingestion: May be harmful if swallowed. Skin: May be harmful if absorbed through skin. Causes skin burns. Eyes: Causes eye burns. Causes severe eye burns.</p> <p>Signs and Symptoms of Exposure Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation of vapors may cause: spasm, inflammation and edema of the bronchi, spasm, inflammation and edema of the larynx, Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.</p> <p>Component D: <i>Inhalation:</i> May be harmful if inhaled. Causes respiratory tract irritation. <i>Ingestion:</i> Harmful if swallowed. <i>Skin:</i> Harmful if absorbed through skin. Causes skin irritation. <i>Eyes:</i> Risk of serious damage to eyes.</p>
<i>Carcinogenicity:</i>	N/A
<i>OSHA Permissible Exposure Limit(PEL) Data</i>	No data available
<i>ACGIH Threshold Limit Values (TLV)</i>	No data available

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12. Ecological Information

Component A: No data available

Component B: No data available

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

Component C

Toxicity

Bluegill sunfish: 48-hour LC50 = 99 mg/L

Mosquito fish: 96-hour LC50 = 125 mg/L

Brown shrimp (Crangon crangon): 48-hour LC50 = 30 - 100 mg/L

Component D

Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 8.9 mg/l - 96.0 h

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

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

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.

Component E : No data available

13. Disposal Considerations

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Component A: 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. Observe all federal, state, and local environmental regulations.

Component B and E: Offer surplus and non-recyclable solutions to a licensed disposal company.

Component C: 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

Component D: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. Transport Information:

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

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<u>15. Regulatory information</u>	
<i>California Proposition 65:</i>	N/A
US TSCA (Toxic Substance Control Act):	Component A : Listed Component B : Listed Component C : Listed Component D : Listed Component E : Listed
<i>US CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):</i>	Component A : Not listed Component B : Not listed Component C : Listed Component D : Not listed Component E : Not listed
US SARA Title III	Component A SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: N/A Component B : SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: N/A Component C SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Acute Health Hazard Component D SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Acute Health Hazard Component E SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: N/A

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US Clean Air Act:	Component A, B, C, D and E <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 and E Listed under “Hazardous Substances”: Not listed <i>Listed under “Priority Pollutants”: Not listed</i> 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:
NA	Pennsylvania Revision Date: NA	Pennsylvania	Pennsylvania Revision Date :NA	Pennsylvania Revision Date: NA
NA	New Jersey Revision Date: NA	New Jersey	New Jersey Revision Date: NA	New Jersey Revision Date: NA
NA	NA	Massachusetts Revision Date 2007-03-01	NA	NA

European/International Regulations:

	Component A	Component B	Component C	Component D	Component E
EC EINICS	N/A	N/A	215-185-5	N/A	N/A
EC Risk statements	N/A	N/A	35	N/A	N/A
WGK	1	1	1	1	1
Canada-DSL/NDSL	Not Listed	Not listed	Listed	Listed	Not listed
Canada-WHMIS classification	N/A	N/A	E	D2B	N/A
Canada-Canadian Ingredient Disclosure List	N/A	Listed	Listed	Listed	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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