Safety Data Sheet (SDS)

Revision Number: 1.2	*Last updated: April 2015*

1. Product and Company Identification

Product Name:	**SensoLyte® 520 MMP Substrate sampler 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	AS-71170
Unit Size	1 kit

2. Hazards Identification

Emergency Overview:

GHS Hazard Classification:

GHS Physical Hazards

Component A,B,C: Flammable liquid (Category 4)
Component D,E: Not Applicable

GHS Health and Environmental Hazards

Component A,B: Irritant to eyes and skin
Component C: Irritant to eyes and skin, acute toxicity, target organs- kidneys and nerves
Component D: Irritant to eyes and skin
Component E: Skin irritant

GHS Signal Words:

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

GHS Hazard Statements:

Component A,B: H227 Combustible liquid
Component C: H300 + H310 Fatal if swallowed or in contact with skin.
H330 Fatal if inhaled.
Component D: H302 Harmful if swallowed.
Component E: H303 May be harmful if swallowed.
H319 Causes serious eye irritation.
H402 Harmful to aquatic life.

GHS Precautionary Statements:

Component A,B,D: - None
Component C: P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing.
P284 Wear respiratory protection.
P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.
P310 Immediately call a POISON CENTER or doctor/physician

Component E: P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection/face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water.
Remove contact lenses, if present and easy to do. Continue rinsing.
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.

HMIS Classification:

Component A:	**Component B:**	**Component C:**	**Component D:**	**Component E:**
Health hazard: 0	*Health hazard:* 0	*Health hazard: 4*	*Health hazard: 0*	*Health hazard: 2*
Flammability: 2	*Flammability:* 2	*Flammability: 2*	*Flammability: 0*	*Flammability: 0*
Physical hazards: 0	*Physical hazards:* 0	*Physical hazards:* 0	*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: 4*	*Health hazard: 0*	*Health hazard: 2*
Fire: 2	*Fire:* 2	*Fire: 2*	*Fire: 0*	*Fire: 0*
Reactivity hazard: 0	*Reactivity hazard:* 0	*Reactivity hazard:* 0	*Reactivity hazard:* 0	*Reactivity hazard:* 0

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	Contains APMA and DMSO	6283-24-5 and 67-68-5
Component D	Proprietary	NA
Component E	Proprietary	NA

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,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. Take victim immediately to hospital. Consult a physician.
Eyes: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Component D,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: 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.

5. Fire Fighting Measures

Extinguishing media:	**Component A and B:** For small fires, use alcohol resistant foam, dry chemical, or carbon dioxide. For large fires, use water spray from a safe distance. **Component C:** Use alcohol-resistant foam, dry chemical, carbon dioxide, or water spray. **Component D and E:** Not applicable
Special firefighting procedures:	**Component A and B:** Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. **Component C:** Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. **Component D,E:** Not applicable
Unusual fire and explosions hazards:	**Component A and B:** 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 C:** 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 carbon oxides and sulphur oxides formed under fire conditions. **Component D and E:** Not applicable

6. Accidental Release Measures

Containment and spill response	**Component A and B:** 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. **Component C:** Wear respiratory protection and provide adequate ventilation. Avoid dust formation and inhalation. Prevent further leakage or spillage if safe to do so. Pick up and arrange for disposal without creating dust. Store in tightly closed container for disposal. Do not let material enter drains or discharge into the environment.

	Component D: Not applicable **Component E:** If necessary, neutralize with dilute acetic acid. Use appropriate equipment to place in appropriate waste disposal container. Spread water on contaminated surface and dispose of according to local and regional requirements.
PPE	Use personal protective equipment

7 . Handling and Storage

Component A and B
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 C
Handling: Avoid contact with skin and eyes. Prevent formation of dust and aerosols and provide adequate ventilation.
Storage: Store in a tightly closed container in a dry well-ventilated area.
Component D: Not applicable
Component E:
Handling: Do not ingest or inhale.
Storage: Store in a tightly closed container in a cool, well-ventilated area. Keep away from sources of ignition. Keep away from incompatible materials such as oxidizers and metals.

8. Exposure Controls / Personal Protection

Engineering controls	**Component A and B:** Facilities storing and using this material should be equipped with a safety shower and eyewash station. Adequate ventilation should also be present. **Component C:** Facilities storing and using this material should be equipped with a safety shower and eyewash station. Adequate ventilation should also be present. **Component D:** Not applicable **Component E:** 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.
PPE	**Component A and B** *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. *Hands:* Use chemical resistant, impervious gloves. Appropriate techniques should be used to remove potentially contaminated gloves. *Eyes:* Wear chemical splash goggles. **Component C**

	Respiratory System: 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:* 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:* Handle with face shield and safety glasses. **Component D:** Not applicable **Component E:** *Respiratory System:* Use an approved/certified dust respirator. *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:* Handle with safety glasses.

9. Physical and Chemical Properties

Physical State	Liquid
Odo	Not determined
Solubility in Water	Soluble
Specific Gravity	Not determined
pH	Component D –7.5 Component E -8
Boiling Point	Not determined
Melting Point	Not determined
Flash Point	Not determined
Vapor Pressure:	Not determined
Vapor Density:	Not determined

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: PV6210000 Component C: OV5550000 Component D: NA Component E: NA
Toxicity	*Component A, Component B and Component C contains 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 C contains APMA* *For **APMA*** LD50 Intravenous - mouse - 18 mg/kg
Health Hazards	*No data available*
Potential Hazards	**Potential Health Effects** **Component C** **Inhalation** May be fatal if inhaled. May cause respiratory tract irritation. **Skin** May cause skin irritation. May be fatal if absorbed through skin. **Eyes** May cause eye irritation. **Ingestion** May be fatal if swallowed. **Target Organs** Kidney, Nerves.
Carcinogenicity:	No data available
OSHA Permissible Exposure Limit(PEL) Data	No data available
ACGIH Threshold Limit Values (TLV)	No data available

12. Ecological Information

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

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

For 4-Aminophenylmercury acetate, CAS-No. 6283-24-5, (Component **C**)

Toxicity

No data available

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 organisms, may cause long-term adverse effects in the aquatic environment.

13. Disposal Considerations

For 4-Aminophenylmercury acetate, CAS-No. 6283-24-5 (Component C)
Observe all federal, state, and local environmental regulations. 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.

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

UN Number	3316
Hazard Class	9
Packing Group	II
Proper Shipping Name (DOT)	Chemical kit

15. Regulatory information

California Proposition 65:	**Component C:** WARNING! This product contains a chemical known in the Sta cause birth defects or other reproductive harm. 4-Aminophenylmercury acetate. CAS-No. 6283-24-5 Revision Date 1990-07-01
US TSCA (Toxic Substance Control Act):	Component **A,B,C,E**: Listed Component **D**: Not listed
US CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act:	Component **A,B,C :** 261.33 8(d). Component **D** : Not listed Component **E**: CAS# 60-00-4: 5000 lb final RQ; 2270 kg final RQ
US SARA Title III	Component **A,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: Acute Health Hazard, Chronic Health Hazard 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 Hazard
US Clean Air Act: *US Clean Water 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* Components **A, B, C, and D** Listed under "Hazardous Substances": Not listed *Listed under "Priority Pollutants": Not listed* Listed under "Toxic Pollutants": Not listed *Component **E*** 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:
Pennsylvania Revision Date 2007-03-01	Pennsylvania Revision Date 2007-03-01	Pennsylvania Revision Date 1987-01-01	*N/A*	Pennsylvania Revision Date 2007-03-01
New Jersey Revision Date 2007-03-01	New Jersey Revision Date 2007-03-01	New Jersey Revision Date 1987-01-01	N/A	New Jersey Revision Date 2007-03-01
N/A	*N/A*	*N/A*	*N/A*	Massachusetts Revision Date 2007-03-01

European/International Regulations:

	Component A	Component B	Component C	Component D	Component E
EC EINICS	200-664-3	200-664-3	200-664-3 228-497-1	N/A	200-573-9
EC Risk statements	36/37/38	36/37/38	26/27/28-33-50/53	N/A	36/37/38
WGK	1	1	1	N/A	2
Canada- *DSL/NDSL*	Listed	Listed	Listed	Not listed	Listed
Canada- *WHMIS classification*	D2B	D2B	D2B	N/A	D2B
Canada- *Canadian Ingredient Disclosure List*	Listed	Listed	Listed	Not 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.