

# Safety Data Sheet (SDS)

<i>Revision Number: 1.1</i>	<i>Last updated: September, 2019</i>		
<b><u>1. Product and Company Identification</u></b>			
<i>Product Name:</i>	<b>SensoLyte<sup>®</sup> 520 Granzyme A Activity Assay Kit *Fluorimetric*</b>		
<i>Manufacturer/Supplier:</i>	<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">AnaSpec, Inc. www.anaspec.com 34801 Campus Drive Fremont, CA 94555 Tel: 510-791-9560 Fax: 510-791-9572 Email: service@anaspec.com</td> <td style="width: 40%; text-align: right;">Eurogentec S.A www.eurogentec.com LIEGE Science Park 4102 Seraing, Belgium Tel: +32-4-3727400 Fax: +32-4-3727500 EGT Helpdesk, Tel: +32-4-3727500</td> </tr> </table>	AnaSpec, Inc. www.anaspec.com 34801 Campus Drive Fremont, CA 94555 Tel: 510-791-9560 Fax: 510-791-9572 Email: service@anaspec.com	Eurogentec S.A www.eurogentec.com LIEGE Science Park 4102 Seraing, Belgium Tel: +32-4-3727400 Fax: +32-4-3727500 EGT Helpdesk, Tel: +32-4-3727500
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<i>Catalog Number</i>	AS-72260		
<i>Unit Size</i>	1 kit		
<b><u>2. Hazards Identification</u></b>			
<i>Emergency Overview:</i>			
<i>GHS Hazard Classification:</i>			
<i>GHS Physical Hazards</i>			
<p><b>Component A and B:</b> Flammable liquid (Category 4)</p> <p><b>Component C:</b> Skin irritation (Category 2), Eye irritation (Category 2A)</p> <p><b>Component D:</b> Flammable liquids (Category 3), Oral (Category 3), Skin irritation (Category 2A), Eye irritation (Category 2A), Specific target organ toxicity - single exposure (Category 3), Reproductive toxicity (Category 1B)</p>			
<i>GHS Health and Environmental Hazards</i>			
<b>All components:</b> Irritant to eyes and skin			
<i>GHS Signal Words:</i>			
<p><b>Component A, B and C:</b> Warning</p> <p><b>Component D:</b> Danger</p>			
<i>GHS Hazard Statements:</i>			
<p><b>Component A and B:</b> H227 Combustible liquid</p> <p><b>Component C:</b> H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.</p> <p><b>Component D:</b> H226 Flammable liquid and vapor. H301 Toxic if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H360 May damage fertility or the unborn child.</p>			

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*GHS Precautionary Statements:***Component A and B:**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P280 Wear protective gloves/ eye protection/ face protection.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P403 + P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/ container to an approved waste disposal plant.

**Component C:** P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection

**Component D:** P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ eye protection/ face protection. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 Call a POISON CENTER/doctor if you feel unwell. P321 Specific treatment (see supplemental first aid instructions on this label). P330 Rinse mouth. P332 + P313 If skin irritation occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant.

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**HMIS Classification:**

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

**NFPA Rating:**

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

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

<i>Chemical Name:</i>	<i>Description</i>	<i>CAS Number:</i>
<b>Component A</b>	Contains DMSO	67-68-5
<b>Component B</b>	Contains DMSO	67-68-5
<b>Component C</b>	Proprietary	NA
<b>Component D</b>	Contain DMF	68-12-2

**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 and 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. Consult a physician.

**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:* Flush eyes with water as a precaution. Consult a physician.

**Component D**

*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. Consult a physician.

*Skin:* Wash off with soap and plenty of water. Consult a physician.

*Eyes:* Flush eyes with water as a precaution. Consult a physician.

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<b><u>5. Fire Fighting Measures</u></b>	
<i>Extinguishing media:</i>	<p><b>Component A and B:</b> For small fires, use dry chemical, or carbon dioxide. For large fires, use water spray from a safe distance.</p> <p><b>Component C and D:</b> Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.</p>
<i>Special firefighting procedures:</i>	<p><b>Component A and B:</b> Fire fighters should wear positive pressure self-contained breathing apparatus and full turnout gear.</p> <p><b>Component C and D:</b> Wear self-contained breathing apparatus for firefighting if necessary.</p>
<i>Unusual fire and explosions hazards:</i>	<p><b>Component A and B:</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.</p> <p><b>Component C and D:</b> Hazardous Carbon oxides, nitrogen oxides (NOx) formed under fire conditions.</p>
<b><u>6. Accidental Release Measures</u></b>	
<i>Containment and spill response</i>	<p><b>Component A, B and D:</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. Discharge into the environment must be avoided.</p> <p><b>Component C:</b> Sweep up and shovel. Keep in suitable, closed containers for disposal.</p>
<i>PPE</i>	<p>Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.</p>
<b><u>7. Handling and Storage</u></b>	
<p><b>Component A, B and D:</b>  <i>Handling:</i> 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.  <i>Storage:</i> 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.</p> <p><b>Component C:</b>  <i>Handling:</i> Avoid contact with skin and eyes.  <i>Storage:</i> Keep container tightly closed in a dry and well-ventilated place.</p>	

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<b>8. Exposure Controls / Personal Protection</b>	
<i>Engineering controls</i>	<p><b>Component A, B and D:</b> Facilities storing and using this material should be equipped with a safety shower and eyewash station. Adequate ventilation should also be present. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.</p> <p><b>Component C:</b> General industrial hygiene practice.</p>
<i>PPE</i>	<p><b>All Components:</b></p> <p><i>Eye/face protection</i> Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).</p> <p><i>Skin protection</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 good laboratory practices. Wash and dry hands.</p> <p><i>Body Protection</i> Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.</p> <p><i>Respiratory protection</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>Control of environmental exposure</i> No special environmental precautions required.</p>
<b>9. Physical and Chemical Properties</b>	
<i>Physical State</i>	Liquid
<i>Odor</i>	Not determined
<i>Solubility in Water</i>	Soluble
<i>Specific Gravity</i>	Not determined
<i>pH</i>	Component C: 7.5
<i>Boiling Point</i>	Not determined
<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>10. Stability and Reactivity</b>	
<i>Thermal Decomposition</i>	Not applicable
<i>Dangerous Products of Decomposition</i>	Not applicable
<i>Dangerous Reactions</i>	Not applicable

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<b><u>11. Toxicological Information</u></b>	
<i>RTECS Number</i>	<b>Component A and B:</b> PV6210000 <b>Component C:</b> No data available. <b>Component D:</b> LQ2100000
<i>Toxicity</i>	<b>Component A and B contain DMSO.</b> <b>For DMSO</b> 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 <b>Component C:</b> No data available. <b>Component D:</b> Oral LD50 - Rat - male and female - 3,010 mg/kg (OECD Test Guideline 401) Dermal LD50 - Rabbit - 1,500 mg/kg Remarks: (IUCLID) Serious eye damage/eye irritation Eyes - Rabbit Result: Eye irritation Remarks: (IUCLID)
<i>Health Hazards</i>	No data available.
<i>Potential Hazards</i>	<i>Inhalation:</i> May be harmful if inhaled. Causes respiratory tract irritation. <i>Ingestion:</i> Harmful if swallowed. <i>Skin:</i> May be harmful if absorbed through skin. May cause skin irritation. <i>Eyes:</i> Causes eye irritation. Aggravated Medical Condition: 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.
<i>Carcinogenicity:</i>	No data available
<i>OSHA Permissible Exposure Limit(PEL) Data</i>	No data available
<i>ACGIH Threshold Limit Values (TLV)</i>	No data available
<b><u>12. Ecological Information</u></b>	

*Toxicity***Component A and B:** (contain DMSO)

Dimethyl sulfoxide (DMSO) CAS-No. 67-68-5

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) - &gt; 400,000 mg/l - 96 h

**Component C:** No data available.**Component D:**

Toxicity to fish flow-through test LC50 - Lepomis macrochirus (Bluegill sunfish) - 7,100 mg/l -96 h(N,N-Dimethylformamide) (US-EPA)

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - Daphnia magna (Water flea) - 13,100 mg/l - 48 h(N,NDimethylformamide) (OECD Test Guideline 202)

Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - &gt; 1,000 mg/l - 72 h(N,N-Dimethylformamide) (DIN 38412)

Toxicity to bacteria static test EC50 - Vibrio fischeri - 12,300 - 17,500 mg/l - 5 min(N,NDimethylformamide)

Remarks: (External MSDS)

*Persistence and degradability***Components A, B and C:** No data available.**Component D:**

Biodegradability aerobic - Exposure time 21 d(N,N-Dimethylformamide)

Result: 100 % - Readily biodegradable. (OECD Test Guideline 301E)

Biochemical Oxygen Demand (BOD) 900 mg/g(N,N-Dimethylformamide) Remarks: (Lit.)

Theoretical oxygen demand 1,863 mg/g(N,N-Dimethylformamide) Remarks: (Lit.)

*Bio accumulative potential***Components A, B and C:** No data available.**Component D:**

Cyprinus carpio (Carp) - 56 d

(N,N-Dimethylformamide)

Bioconcentration factor (BCF): 0.3 - 1.2

(OECD Test Guideline 305C)

Remarks: Does not significantly accumulate in organisms.

*Mobility in soil*

No data available

*PBT and vPvB assessment*

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

*Other adverse effects*

No data available

**13. Disposal Considerations****The combustible material (Component A, B and D)** Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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****AnaSpec Inc.**

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<i>UN Number</i>	<b>Component D:</b> 2811 & 2265		
<i>Hazard Class</i>	6.1		
<i>Packing Group</i>	III		
<i>Proper Shipping Name (DOT)</i>	N,N-Dimethylformamide		
<b><u>15. Regulatory information</u></b>			
<i>California Proposition 65</i>	N/A		
<i>US TSCA (Toxic Substance Control Act)</i>	<b>All components:</b> Listed		
<i>US CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)</i>	<b>Component A, B and E:</b> 261.33 8(d). <b>Component C and D:</b> N/A		
<i>US SARA Title III</i>	<b>Component A, B and C</b> SARA 302 components: N/A SARA 313 components: N/A SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard <b>Component D</b> SARA 302 components: N/A SARA 313 components: Acute Health Hazard SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard		
<i>US Clean Air Act</i>	<b>All components</b> <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>		
<i>US Clean Water Act</i>	<b>All components</b> <i>Listed under "Hazardous Substances": Not listed</i> <i>Listed under "Priority Pollutants": Not listed</i> <i>Listed under "Toxic Pollutants": Not listed</i>		
<b><i>US States: Right-to-Know: Listed in the following States:</i></b>			
<b>Component A:</b>	<b>Component B:</b>	<b>Component C:</b>	<b>Component D:</b>
Pennsylvania Revision Date 2007-03-01 CAS 67-68-5	Pennsylvania Revision Date 2007-03-01 CAS 67-68-5	Pennsylvania CAS 7647-14-5 CAS 77-86-1	Pennsylvania CAS 51050-59-0 CAS 68-12-2
New Jersey Revision Date 2007-03-01 CAS 67-68-5	New Jersey Revision Date 2007-03-01 CAS 67-68-5	New Jersey CAS 7647-14-5 CAS 77-86-1	New Jersey CAS 51050-59-0 CAS 68-12-2
Massachusetts N/A	Massachusetts N/A	Massachusetts N/A	Massachusetts CAS 68-12-2

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**European/International Regulations:**

	<b>Component A:</b>	<b>Component B:</b>	<b>Component C:</b>	<b>Component D:</b>
<i>EC EINECS</i>	200-664-3	200-664-3	231-598-3	200-679-5
<i>EC Risk statements</i>	36/37/38	36/37/38	36/37/38, 22	N/A
<i>WGK</i>	1	1	1	N/A
<i>Canada-DSL/NDSL</i>	Listed	Listed	Listed	Listed
<i>Canada-WHMIS classification</i>	D2B	D2B	D1A, E	B3,D1B,D2A,D2B
<i>Canada-Canadian Ingredient Disclosure List</i>	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.

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