



Safety Data Sheet

Section 1: Product and Company Identification

1.1 Product Identifiers:

Product Name: ABRAXIS® Patulin Strip Test Kits

Product Code: 500130, 500135

1.2 Identified Use: Determination of Patulin in samples. **Restrictions on Use:** For research use only.

1.3 Company: Gold Standard Diagnostics, 795 Horsham Road, Horsham, PA 19044 USA, info.abraxis@us.goldstandarddiagnostics.com
+1(215) 357-3911

1.4 Emergency Telephone Number: +1(215) 357-3911

Section 2: Hazard(s) Identification

2.1 Classification of the substance:

Patulin	Acute toxicity, Oral (Category 2), H300 Skin Irritation (Category 2), H315
Sodium azide	Acute toxicity, Oral (Category 2), H300 Acute toxicity, Inhalation (Category 2), H330 Acute toxicity, Dermal (Category 1), H310 Specific target organ toxicity - repeated exposure, Oral (Category 2), Brain, H373 Short-term (acute) aquatic hazard (Category 1), H400 Long-term (chronic) aquatic hazard (Category 1), H410
Dimethyl sulfoxide (DMSO)	Flammable liquids (Category 4), H227

2.2 GHS Label elements, including precautionary statements:

Patulin		H300 + H315 Fatal if swallowed, causes skin irritation	P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/ protective clothing. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant.
Sodium azide		H300 + H310 + H330 Fatal if swallowed, in contact with skin or if inhaled. H373 May cause damage to organs (Brain) through prolonged or repeated exposure if swallowed. H410 Very toxic to aquatic life with long lasting effects.	P260 Do not breathe dust. P262 Do not get in eyes, on skin, or on clothing. 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. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing. P284 Wear respiratory protection. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. P302 + P350 + P310 IF ON SKIN: Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/ physician. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P314 Get medical advice/ attention if you feel unwell. P362 Take off contaminated clothing and wash before reuse. P391 Collect spillage. 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.
DMSO		H227 Combustible liquid.	P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

			<p>P280 Wear protective gloves/ eye protection/ face protection.</p> <p>P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.</p> <p>P403 + P235 Store in a well-ventilated place. Keep cool.</p> <p>P501 Dispose of contents/ container to an approved waste disposal plant.</p>
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2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – Sodium Azide: Contact with acids liberates very toxic gas.

Sodium Azide may react with lead and copper plumbing to form highly explosive metal azides. Rapidly absorbed through skin.

Patulin: None known.

2.4 Unknown acute toxicity: None known.

Section 3: Composition / Information on Ingredients

3.2 Mixtures:

<p>Patulin Formula: C₇H₆O₄ Molecular weight: 154.12 g/mol CAS-No.: 149-29-1 EC-No.: 205-735-2</p>	<10 ug	Acute Tox. 2; Skin Irrit. 2; H300, H315
<p>Sodium Azide Formula: N₃Na Molecular weight: 65.01 g/mol CAS-No.: 26628-22-8 EC-No.: 247-852-1</p>	< 0.5%	Acute Tox. 2; Acute Tox. 1; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H373, H400, H410 M-Factor - Aquatic Acute: 1 M-Factor – Aquatic Chronic: 1
<p>DMSO Formula: C₂H₆OS Molecular weight: 78.13 g/mol CAS-No.: 67-68-5 EC-No.: 200-664-3</p>	5%	Flammable liquids (Category 4), H227

Section 4: First Aid Measures

4.1 Description of first aid measures: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

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

If swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No data available. Treat symptomatically.

Section 5: Fire-fighting Measures

5.1 Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire. Sodium azide: Sand powder against metal. DMSO: Water Foam Carbon dioxide (CO₂) Dry powder

5.2 Special hazards arising from the substance or mixture: Patulin: Carbon oxides, combustible Sodium Azide: Sodium oxides, not combustible. DMSO: Carbon oxides, Sulfur oxides, combustible.

5.3 Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information: Remove container from danger zone. Suppress gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures: Use personal protective equipment (see section 8). Avoid dust formation. Avoid breathing vapors, mist, dust, or gas. Ensure adequate ventilation. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Remove all sources of ignition. Evacuate personnel to safe areas.

6.2 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.

6.3 Methods and materials for containment and cleaning up: Contain spillage. Solids (if applicable): Pick up and arrange disposal without creating dust. Sweep up and shovel. Liquids (if applicable): Absorb with non-combustible liquid-binding material (sand, earth, diatomite, vermiculite). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections: For information on safe handling see section 7. For information on personal protection see section 8. For information on disposal see section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling: See section 2. Avoid inhalation of vapors or mist and avoid contact with skin and eyes. Wear appropriate personal protective equipment. Use explosion-proof equipment. Keep away from sources of ignition. Do not eat, drink, or smoke in work area. Take measures to prevent the buildup of electrostatic charge.

7.2 Precautions for safe storage: Keep container(s) tightly closed in a dry, well-ventilated place. Protect from physical damage. See label or product insert for appropriate storage temperature and additional specific information. Keep away from open flames, hot surfaces, and sources of ignition. Take precautionary measures against static discharge. Sodium azide: Do not store near acids.

7.3 Specific end use(s): No data available

Section 8: Exposure Controls / Personal Protection

8.1 Control parameters:

Patulin	Contains no substances with occupational exposure limit values.			
Sodium Azide	26628-22-8	C	0.29 mg/m ³	USA. ACGIH Threshold Limit Values (TLV). Not classifiable as a human carcinogen
		C	0.11 ppm	USA. ACGIH Threshold Limit Values (TLV)
		C	0.1 ppm 0.3 mg/m ³	Potential for dermal absorption: USA. NIOSH Recommended Exposure Limits
		C	0.1 ppm 0.3 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
DMSO	67-68-5	TWA	250 ppm	USA. Workplace Environmental Exposure Levels (WEEL)

Derived No Effect Level (DNEL)

Patulin Sodium Azide DMSO	No data available
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Predicted No Effect Concentration (PNEC)

Patulin Sodium Azide DMSO	No data available
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8.2 Exposure controls:

Appropriate engineering controls: Provide adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Keep away from food and beverages. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment: The usual precautionary measures, including eye/face/skin protection, should be taken when handling any chemical. Avoid contact with eyes, skin, and clothing.

Eye protection: As with handling of any chemical, wear approved safety goggles.

Skin protection: Handle with gloves. No specific information regarding glove material or thickness is available, but gloves must be impermeable and resistant to the substance being handled. 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.

Respiratory protection: As with any chemical, where excessive vapor, mist, or dust may result, use a chemical fume hood or approved respiratory protection equipment.

Body protection: Lightweight, flame-resistant protective clothing.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties of the substance

Appearance: Strip test

Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting point/freezing point: No data available

Initial boiling point and boiling range: No data available

Flash point: No data available

Evaporation rate: No data available

Flammability (solid, gas): No data available
Upper/lower flammability or explosive limits No data available
Vapor pressure: No data available
Vapor density: No data available
Relative density: No data available
Water solubility: No data available
Partition coefficient: n-octanol/water: No data available
Auto-ignition temperature: Not applicable
Decomposition temperature: No data available
Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available
9.2 Other information: No data available

Section 10: Stability and Reactivity

10.1 Reactivity: Vapors may form explosive mixture with air. Sodium azide: Contact with acids liberates very toxic gas.
10.2 Chemical stability: Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions: Sodium azide – Risk of explosion and/or of toxin gas formation with the following substances: Heavy metals, bromine dimethylsulfate, acids, dichloromethane, carbon disulfide, sulfuric acid, halogenated hydrocarbon, copper, lead, chromyl chloride, nitrates, benzoyl chloride, acids. DMSO - Risk of explosion with: acetylidene, organic halides, perchlorates, Acid chlorides, nonmetallic halides iron(III) compounds, nitrates, fluorides, chlorates, hydrides, perchloric acid, Oxides of phosphorus, Nitric acid, silver compounds, silicon compounds, silanes, acid halides, Exothermic reaction with: boron compounds, oxyhalogenic compounds, Potassium, sodium, Strong oxidizing agents, phosphorus halides, strong reducing agents, Acid chlorides, Strong acids, silver salt, nitrogen dioxide, Risk of ignition or formation of inflammable gases or vapours with: potassium permanganate
10.4 Conditions to avoid: Avoid contact with incompatible materials. Avoid exposure to heat and direct sunlight.
10.5 Incompatible materials: Patulin: Strong oxidizing agents, Acids. Sodium azide: Metals and metallic compounds
10.6 Hazardous decomposition products: In the event of fire, see section 5.

Section 11: Toxicological Information

11.1 Information on toxicological effects

Patulin	<p> Acute toxicity LD50 Oral - Rat – 27.79 mg/kg Remarks: Behavioral: Changes in motor activity (specific assay). Lungs, Thorax, or Respiration: Dyspnea Gastrointestinal: Other changes. (RTECS) Inhalation: No data available Dermal: No data available Skin corrosion/irritation Remarks: Causes skin irritation Serious eye damage/eye irritation Remarks: No data available Respiratory or skin sensitization Remarks: No data available Germ cell mutagenicity Laboratory experiments have shown mutagenic effects. Carcinogenicity IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. Reproductive toxicity: No data available Specific target organ toxicity - single exposure: No data available Specific target organ toxicity - repeated exposure: No data available Aspiration hazard: No data available </p>
Sodium Azide	<p> Acute toxicity LD50 Oral - Rat - 27 mg/kg Remarks: (RTECS) LC50 Inhalation - Rat - male and female - 4 h - 0.054 - 0.52 mg/l - dust/mist (US-EPA) LD50 Dermal - Rabbit - 20 mg/kg Remarks: (RTECS) No data available Skin corrosion/irritation </p>

	<p>Skin - In vitro study Result: No skin irritation (OECD Test Guideline 439) Serious eye damage/eye irritation Eyes - Bovine cornea Result: No eye irritation - 4 h (OECD Test Guideline 437) Respiratory or skin sensitization Local lymph node assay (LLNA) - Mouse Result: negative (OECD Test Guideline 429) Germ cell mutagenicity Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Test Type: unscheduled DNA synthesis assay Test system: Chinese hamster lung cells Metabolic activation: without metabolic activation Method: OECD Test Guideline 482 Result: negative Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells Metabolic activation: without metabolic activation Method: OECD Test Guideline 479 Result: negative Carcinogenicity IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. Reproductive toxicity: No data available Specific target organ toxicity - single exposure: No data available Specific target organ toxicity - repeated exposure: Oral - May cause damage to organs through prolonged or repeated exposure. Aspiration hazard: No data available</p>
DMSO	<p>Acute toxicity LD50 Oral - Rat - male and female - 28,300 mg/kg (OECD Test Guideline 401) LC0 Inhalation - Rat - male and female - 4 h - > 5.33 mg/l - dust/mist (OECD Test Guideline 403) LD50 Dermal - Rat - male and female - 40,000 mg/kg Remarks: (ECHA) Skin corrosion/irritation Skin - Rabbit Result: slight irritation - 4 h (OECD Test Guideline 404) Serious eye damage/eye irritation Eyes - Rabbit Result: slight irritation - 24 h (OECD Test Guideline 405) Respiratory or skin sensitization Maximization Test - Guinea pig Result: negative (OECD Test Guideline 406) Local lymph node assay (LLNA) - Mouse Result: negative (OECD Test Guideline 429) Germ cell mutagenicity Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: sister chromatid exchange assay</p>

	<p>Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 479 Result: negative Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Species: Rat Application Route: Intraperitoneal Method: OECD Test Guideline 474 Result: negative Carcinogenicity IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. Reproductive toxicity No data available Specific target organ toxicity - single exposure No data available Specific target organ toxicity - repeated exposure No data available Aspiration hazard No data available</p>
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11.2 Additional Information

Sodium Azide RTECS: VY8050000

Nausea, Headache, Vomiting, Laboratory experiments in animals have shown sodium azide to produce a profound hypotensive effect, demyelination of myelinated nerve fibers in the central nervous system, testicular damage, blindness, attacks of rigidity, and hepatic and cerebral effects., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information

Chemical Name	12.1 Toxicity	12.2 Persistence and Degradability	12.3 Bio-accumulative potential	12.4 Mobility in Soil	12.5 Results of PBT and vPvB assessment	12.6 Other adverse effects
Patulin	No data available	No data available	No data available	No data available	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted	No data available
Sodium azide	Toxicity to fish flow-through test LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) - 2.75 mg/l - 96 h (OECD Test Guideline 203) Toxicity to algae static test ErC50 – <i>Pseudo-kirchneriella subcapitata</i> - 0.35 mg/l - 96 h (OECD Test Guideline 201) Toxicity to bacteria	The methods for determining the biological degradability are not applicable to inorganic substances.	No data available	No data available	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Do not empty into drains.
DMSO	Toxicity to fish - static test LC50 - <i>Danio rerio</i> (zebra fish) - > 25,000 mg/l - 96 h (OECD Test Guideline 203) Toxicity to daphnia and other aquatic invertebrates - static test	aerobic - Exposure time 28 d Result: 31 % - Not readily biodegradable. (OECD Test Guideline 301D)	No data available	No data available	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted	No data available

	EC50 - Daphnia magna (Water flea) - 24,600 mg/l - 48 h (OECD Test Guideline 202) Toxicity to algae - static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 17,000 mg/l - 72 h (OECD Test Guideline 201) Toxicity to bacteria - EC50 - activated sludge - 10 - 100 mg/l - 30 min (ISO 8192)					
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Section 13: Disposal Considerations

13.1 Waste treatment methods

Product: Chemical residues and remains should be routinely handled as special waste. Leave chemicals in original containers and do not mix with other waste. This must be disposed of in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend contact of the relevant authorities.

Contaminated packaging: All waste must be handled and disposed according to local, state, and federal regulations. Refer to sections 7 and 8 for safe handling guidance.

Section 14: Transport Information

Chemical Name	DOT (US)	IMDG	IATA
Patulin	UN number: 3462 Class: 6.1 Packing group: II Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Patulin)	UN number: 3462 Class: 6.1 Packing group: II EMS-No: F-A, S-A Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Patulin)	UN number: 3462 Class: 6.1 Packing group: II Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Patulin)
Sodium azide	UN number: 1687 Class: 6.1 Packing group: II Proper shipping name: Sodium azide Reportable Quantity (RQ): 1000 lbs Poison Inhalation Hazard: No	UN number: 1687 Class: 6.1 Packing group: II EMS-No: F-A, S-A Proper shipping name: SODIUM AZIDE Marine pollutant: yes	UN number: 1687 Class: 6.1
DMSO	Not dangerous goods	NA-Number: 1993 Class: NONE Packing group: III Proper shipping name: Combustible liquid, n.o.s. (dimethyl sulphoxide) Reportable Quantity (RQ): Poison Inhalation Hazard: No	Not dangerous goods

Section 15: Regulatory Information

Chemical Name	SARA 304	SARA 302	SARA 313	SARA 311/312	State Right-To-Know
Patulin	Does not contain any components with a section 304 ES RQ.	Does not contain any components with a section 302 EHS TPQ.	Does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, section 313.	Acute Health Hazard Chronic Health Hazard	Not subject to Massachusetts Right-To-Know, Maine Chemical of High Concern, Vermont Chemical of High Concern, Washington Chemical of High Concern,
Sodium azide		CAS-No. 26628-22-8 Revision Date 2007-07-01	CAS-No. 26628-22-8 Revision Date 2007-07-01	Acute Health Hazard	Massachusetts Right To Know Component Pennsylvania Right To Know Component

DMSO	Does not contain any components with a section 304 ES RQ.	Does not contain any components with a section 302 EHS TPQ.	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.	Fire Hazard Chronic Health Hazard	Not subject to Massachusetts Right-To-Know, Maine Chemical of High Concern, Vermont Chemical of High Concern, Washington
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Section 16: Other information

This information is based on our present knowledge. While Gold Standard Diagnostics believes that the data contained herein are factual and the opinions expressed represent a best effort to present accurate information, the data are not to be taken as a warranty or representation for which Gold Standard Diagnostics assumes legal responsibility. The information shall not be taken as being all-inclusive and is to be used only as a guide. The data are offered solely for the user's consideration, investigation, and verification. These suggestions should not be confused with either state, municipal, or insurance requirements, or with national safety codes and constitute no warranty. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state, and local regulations.

All materials and mixtures may present unknown hazards and should be used with caution. Since Gold Standard Diagnostics cannot control the methods, volumes, or conditions of use of this product, Gold Standard Diagnostics shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material. This product is sold for research use only. It is not for any human or animal therapeutic or clinical diagnostic use.

Date this SDS is effective: 4/30/2025

Version: 02

Revision History:

Revision	Description	Date
02	Change the concentration percentage and added EC number	04/30/2025
01	Document creation	11/27/2024