

BIOL-162 – General Biology II

List of Chemicals used in Lab

Carosafe – specimens in preservative

Detain – protest slowing solution

Isopropyl Alcohol – alcohol prep pads

Nasco Guard – specimens in preservative

Safety Data Sheet

Protoslo® Quieting Solution

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name: Protoslo® Quieting Solution
Recommended Use: Science education applications
Synonyms: Protozoa quieting solution
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification:

Other Safety Precautions: Not a dangerous substance according to GHS classification criteria.
No known OSHA hazards.

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	90
Hydroxyethyl Cellulose	9004-62-0	10

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: N/A
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Poses little or no immediate hazard
No special spill clean-up considerations. Collect and discard in regular trash.

Section 7 Handling and Storage

Handling: Keep container tightly closed in a cool, well-ventilated place.
Storage: Keep container tightly closed in a cool, well-ventilated place.
Storage Code: Green - general chemical storage

Safety Data Sheet

Section 8

Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
No data available	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

Nitrile

Section 9

Physical Data

Formula: See Section 3

Molecular Weight: N/A

Appearance: Liquid

Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting Point: No data available

Boiling Point: 100 C

Flash Point: No data available

Flammable Limits in Air: N/A

Vapor Pressure: N/A

Evaporation Rate (BuAc=1): Approximately 1

Vapor Density (Air=1): N/A

Specific Gravity: N/A

Solubility in Water: Soluble

Log Pow (calculated): No data available

Autoignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Percent Volatile by Volume: N/A

Section 10

Reactivity Data

Reactivity:

No data available

Chemical Stability:

Stable under normal conditions.

Conditions to Avoid:

None known.

Incompatible Materials:

Water-reactive materials

Hazardous Polymerization:

Will not occur

Section 11

Toxicity Data

Routes of Entry: N/A
Symptoms (Acute): Eye disorders
Delayed Effects: No data available

Acute Toxicity:

Chemical Name
Water

CAS Number
7732-18-5

Oral LD50
Oral LD50 Rat 90
g/kg

Dermal LD50

Inhalation LC50

Carcinogenicity:

Chemical Name
No data available

CAS Number

IARC
Not listed

NTP
Not listed

OSHA
Not listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.

Safety Data Sheet

Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2
Chronic: Reproductive data cited., Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12

Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name: Not regulated for transport by DOT	Air - IATA Proper Shipping Name: Not regulated for transport by IATA.
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Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
No data available		No	No	No	No	No

Section 16

Additional Information

Revised: 02/04/2014 **Replaces:** 02/04/2014 **Printed:** 06-12-2014

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

Safety Data Sheet

Specimens in Carosafe®

CAROLINA
www.carolina.com

Section 1

Product Description

Product Name: Specimens in Carosafe®
Recommended Use: Science education applications
Synonyms: None Known
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2

Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



May cause cancer.

GHS Classification:
Carcinogenicity Category 1A, Skin Corrosion/Irritation Category 3, Acute Toxicity - Oral Category 5

Other Safety Precautions: IF exposed or concerned: Get medical advice/attention.

Acute Toxicity Oral Contains: 100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Dermal Contains: 100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3

Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Propylene Glycol	57-55-6	
2-Phenoxyethanol	122-99-6	
2-Amino-2-Ethyl-1,3-Propanediol	115-70-8	

Specimens will contain some residual formaldehyde. Cow and Sheep specimens will contain some residual phenol.

Section 4

First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5

Firefighting Procedures

Extinguishing Media: Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6

Spill or Leak Procedures

Safety Data Sheet

Steps to Take in Case Material Is Released or Spilled:

No health effects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7

Handling and Storage

Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid contact with skin and eyes. Do not breathe gas/fumes/vapor/spray.

Storage: Store locked up. Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Green - general chemical storage

Section 8

Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Propylene Glycol	N/A	N/A	N/A	N/A
2-Phenoxyethanol	N/A	N/A	N/A	N/A
2-Amino-2-Ethyl-1,3-Propanediol	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures:

No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use. Provide general room exhaust ventilation if symptoms of overexposure occur as explained Section 11. A respirator is not normally required.

Respirator Type(s):

None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

No information available

Section 9

Physical Data

Formula: See Section 3
Molecular Weight: No data available
Appearance: Preserved Specimen
Odor: Mild distinct sweet, pungent biological odor.
Odor Threshold: No data available
pH: 7
Melting Point: No data available
Boiling Point: No data available
Flash Point: > 200 C
Flammable Limits in Air: No data available

Vapor Pressure: No data available
Evaporation Rate (BuAc=1): No data available
Vapor Density (Air=1): No data available
Specific Gravity: >1
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: No data available

Section 10

Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: None known.
Incompatible Materials: Metals, Strong oxidizing agents, Strong alkalies, Caustics (bases)
Hazardous Decomposition Products: Carbon oxides, Nitrogen containing gases
Hazardous Polymerization: Will not occur

Safety Data Sheet

Section 11

Toxicity Data

Routes of Entry: Inhalation and ingestion.
Symptoms (Acute): Diarrhea, Nausea, Respiratory Irritation, Dermatitis, Allergies
Delayed Effects: No data available

Acute Toxicity: Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Propylene Glycol	57-55-6	Oral LD50 Rat 20000 mg/kg	Dermal LD50 Rabbit 20800 mg/kg	
2-Phenoxyethanol	122-99-6	Oral LD50 Rat 1260 mg/kg	Dermal LD50 Rabbit 5 ml/kg Dermal LD50 Rat 14422 mg/kg	
2-Amino-2-Ethyl-1,3-Propanediol	115-70-8			

Carcinogenicity: Chemical Name	CAS Number	IARC	NTP	OSHA
Propylene Glycol	57-55-6	Not listed	Not listed	Not listed
2-Phenoxyethanol	122-99-6	Not listed	Not listed	Not listed
2-Amino-2-Ethyl-1,3-Propanediol	115-70-8	Not listed	Not listed	Not listed

Chronic Effects:
Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: No information available
Chronic: No information available

Section 12

Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: This material is expected to have high mobility in soil. It absorbs weakly to most soil types.
Persistence: Biodegradation, Dissolved into water
Bioaccumulation: Bioconcentration is not expected to occur.
Degradability: Biodegrades at a moderate rate.
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Propylene Glycol	57-55-6	96 HR LC50 PIMEPHALES PROMELAS 710 MG/L 96 HR LC50 PIMEPHALES PROMELAS 51400 MG/L [STATIC] 96 HR LC50 ONCORHYNCHUS MYKISS 51600 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA > 1000 MG/L [STATIC] 24 HR EC50 DAPHNIA MAGNA > 10000 MG/L 96 HR EC50 PSEUDOKIRCHNERIELLA SUBCAPITATA 19000 MG/L
2-Phenoxyethanol	122-99-6	96 HR LC50 PIMEPHALES PROMELAS 366 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA > 500 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS > 500 MG/L
2-Amino-2-Ethyl-1,3-Propanediol	115-70-8	Not applicable

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name: Not regulated for transport by US DOT.
Air - IATA Proper Shipping Name: Not regulated for air transport by IATA.

Safety Data Sheet

Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Propylene Glycol	57-55-6	No	No	No	No	No
2-Phenoxyethanol	122-99-6	No	No	No	No	No
2-Amino-2-Ethyl-1,3-Propanediol	115-70-8	No	No	No	No	No

California Prop 65:

WARNING: This product contains a chemical known to the state of California to cause cancer.

Section 16

Additional Information

Revised: 04/03/2014

Replaces: 06/20/2013

Printed: 06-12-2014

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Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
NA	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 420.00

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Isopropyl Alcohol

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

Hazard class: Specific target organ toxicity, single exposure; Narcotic effects (Category 3). May cause drowsiness or dizziness (H336). Avoid breathing mist, vapors or spray (P261).

The single lethal dose for a human adult is about 250 mL, although as little as 100 mL can be fatal. Although isopropyl alcohol is slightly toxic by definition, teachers should be alert to students attempting to drink this "alcohol" on a dare.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Isopropyl alcohol	67-63-0	C ₃ H ₈ O	60.10	
Synonyms: 2-Propanol, Rubbing alcohol				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).

If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). **If skin irritation occurs:** Get medical advice or attention (P332+P313).

SECTION 5 — FIRE FIGHTING MEASURES

Class IB flammable liquid.

Flash point: 12 °C Flammable limits: Lower: 2.0% Upper: 12.7% Autoignition Temperature: 399 °C

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE

H-1

F-3

R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can. Keep container tightly closed (P233). Keep cool (P235). Use only in a hood or well-ventilated area (P271). Avoid prolonged storage (see Section 10).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

Exposure guidelines: PEL 980 mg/m³ (OSHA); TLV 492 mg/m³ Ceiling 984 mg/m³ (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Distinctive odor like rubbing alcohol.

Soluble: Water, alcohol, and ether

Boiling point: 83 °C

Melting point: -889 °C

Specific gravity: 0.8

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, acetaldehyde, chlorine, ethylene oxide, acids, and isocyanates.

Shelf life: Fair. Organic peroxides may develop if exposed to light and air, which can result in explosions, especially when distilled. Avoid prolonged storage.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Serious eye irritant, mild skin irritant, dizziness, drowsiness, nausea, headache.

Chronic effects: N.A.

Target organs: Eyes, skin, respiratory system.

ORL-RAT LD₅₀: 5045 mg/kg

IHL-RAT LC₅₀: 16,000 ppm/8H

SKN-RBT LD₅₀: 12,800 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #18a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Isopropyl alcohol. Hazard class: 3, Flammable liquid. UN number: UN1219.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-661-7), RCRA code D001.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014



NASCO-Guard® Preserved Specimens

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 05/21/2015 Date of Issue: 05/21/2015 Supersedes Date: 01/02/2014

Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Name: NASCO-Guard® Preserved Specimens

Intended Use of the Product

Science education applications.

Name, Address, and Telephone of the Responsible Party

Nasco
901 Janesville Ave.
Fort Atkinson, WI 53538-0901
800-558-9595

Emergency Telephone Number

Emergency Number: 800-558-9595 (7am-4pm CST, M-F) 24-Hour Emergency Contact — CHEMTREC 800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Classification of the Substance or Mixture

Classification (GHS-US)

Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Skin Sens. 1	H317
Carc. 2	H351

Full text of H-phrases: see section 16

Label Elements

GHS-US Labeling

Signal Word (GHS-US): **WARNING**

Hazard Pictograms (GHS-US):



GHS07



GHS08

Hazard Statements (GHS-US):

H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H351 - Suspected of causing cancer.

Precautionary Statements (GHS-US):

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves, protective clothing, and eye protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

NASCO-Guard® Preserved Specimens

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Chronic Symptoms: Suspected of causing cancer by inhalation. May cause an allergic skin reaction.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, alcohol-resistant foam, carbon dioxide (CO₂), dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising from the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities:
Evacuate area.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Under expected usage conditions, hazardous decomposition products are not expected.
Hazardous decomposition products such as carbon monoxide, aldehydes, alcohols, ethers, organic acids, and other compounds may be generated when material is subjected to high temperatures or fires.

Other Information: Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray).

For Non-Emergency Personnel

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further disposal information refer to section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool, and well-ventilated place. Keep container closed when not in use. Keep/store away from direct sunlight, extremely high or low temperatures, and incompatible materials.

Incompatible Products: Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s) Science education applications.

NASCO-Guard® Preserved Specimens

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Melting Point:	No data available.
Freezing Point:	No data available.
Boiling Point:	No data available.
Flash Point:	No data available.
Auto-ignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Flammability (solid, gas):	No data available.
Vapor Pressure:	No data available.
Relative Vapor Density at 20° C:	No data available.
Relative Density:	No data available.
Solubility:	No data available.
Partition Coefficient; N-Octanol/Water:	No data available.
Viscosity:	No data available.

Other Information No additional information available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products: Under expected usage conditions, hazardous decomposition products are not expected.

Hazardous decomposition products such as carbon monoxide, aldehydes, alcohols, ethers, organic acids, and other compounds may be generated when material is subjected to high temperatures or fires.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity: Not classified.

1,2-Propylene glycol (57-55-6)	
LD50 Oral Rat	20000 mg/kg
LD50 Dermal Rabbit	20800 mg/kg
Formaldehyde (50-00-0)	
LD50 Oral Rat	100 mg/kg
LD50 Dermal Rat	270 mg/kg
ATE (Gases)	700.00 ppmV/4h
Phenol (108-95-2)	
LD50 Oral Rat	340 mg/kg
LD50 Dermal Rabbit	630 mg/kg
LC50 Inhalation Rat	0.316 mg/l/4h (reported as 316 mg/m3/4h)
ATE (Oral)	100.00 mg/kg body weight
ATE (Gases)	700.00 ppmV/4h
ATE (Vapors)	0.32 mg/l/4h
ATE (Dust/Mist)	0.32 mg/l/4h

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified.

Carcinogenicity: Suspected of causing cancer.

NASCO-Guard® Preserved Specimens

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport.

In Accordance with IMDG Not regulated for transport.

In Accordance with IATA Not regulated for transport.

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

NASCO-Guard® Preserved Specimens	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard. Delayed (chronic) health hazard.
1,2-Propylene glycol (57-55-6)	
Listed on the United States TSCA (Toxic Substances Control Act) Inventory	
EPA TSCA Regulatory Flag	Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.
Formaldehyde (50-00-0)	
Listed on the United States TSCA (Toxic Substances Control Act) Inventory	
Listed on the United States SARA Section 302	
Listed on United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	500
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard. Immediate (acute) health hazard. Fire hazard.
SARA Section 313 - Emission Reporting	0.1 %
Phenol (108-95-2)	
Listed on the United States TSCA (Toxic Substances Control Act) Inventory.	
Listed on the United States SARA Section 302.	
Listed on United States SARA Section 313.	
EPA TSCA Regulatory Flag	T - T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 302 Threshold Planning Quantity (TPQ)	≤ 10000
SARA Section 313 - Emission Reporting	1.0 %
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) Inventory	

US State Regulations

Formaldehyde (50-00-0)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
1,2-Propylene glycol (57-55-6)	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	
Formaldehyde (50-00-0)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	