1. PRODUCT AND COMPANY INFORMATION

INVITROGEN CORPORATION
1600 FARADAY AVE.
CARLSBAD, CA 92008
760/603-7200

GIBCO PRODUCTS
INVITROGEN CORPORATION
3175 STALEY ROAD P.O. BOX 68
GRAND ISLAND, NY 14072
716/774-6700

INVITROGEN CORPORATION
3 FOUNTAIN DR.
INCHINNAN BUSINESS PARK
PAISLEY, PA4 9RF
SCOTLAND
44-141 814-6100

INVITROGEN CORPORATION
P.O. BOX 12-502
PENROSE
AUCKLAND 1135
NEW ZEALAND
64-9-579-3024

INVITROGEN CORPORATION
2270 INDUSTRIAL ST.
BURLINGTON, ONT
CANADA L7P 1A1
905/335-2255

INVITROGEN AUSTRALIA PTY LIMITED
2A/14 LIONEL ROAD
MOUNT WAVERLY VIC 3149
AUSTRALIA
1-800-331-627

EMERGENCY NUMBER (SPILLS, EXPOSURES): 301/431-8585 (24 HOUR)
800/451-8346 (24 HOUR)
NON-EMERGENCY INFORMATION: 800/955-6288

Product Name: PYES2.1/V5-HIS-TOPO, TB
Stock Number: 461150

NOTE: If this product is a kit or is supplied with more than one material, please refer to the MSDS for each component for hazard information.

Product Use:
These products are for laboratory research use only and are not intended for human or animal diagnostics, therapeutic, or other clinical uses, unless otherwise stated.

Synonyms:
Not available.

2. COMPOSITION, INFORMATION ON INGREDIENTS

The following list shows components of this product classified as hazardous based on physical properties and health effects:

Component	CAS No.	Percent
No hazardous components		

3. HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********
Occupational exposure presents little or no health hazard.
****

Potential Health Effects:
Eye:
May cause irritation of the eye.

Skin:
May cause skin irritation.

Inhalation:
No toxicity expected from inhalation.

Ingestion:
Mildly irritating to mouth, throat, and stomach. Can cause abdominal discomfort.

Chronic:
No data on cancer.

4. FIRST AID MEASURES

Eye:
Flush with water in an eyewash for at least 15 minutes, holding eyelids open. Remove contact lenses, clean before re-use. Obtain medical attention if symptoms develop (redness, itching, etc.).

Skin:
Wash with plenty of soap and water. Obtain medical attention if symptoms develop (redness, itching, etc.). Remove contaminated clothes, wash before re-use.

Inhalation:
Remove person to fresh air. Obtain medical attention unless effects are mild and temporary.

Ingestion:
Give plenty of water, if conscious. If vomiting occurs naturally, wash mouth out. Be prepared to induce vomiting upon a physician's advice. Obtain medical attention if symptoms develop.

Note To Physician:
Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flashpoint Deg C:	199
Upper Flammable Limit %:	Not available.
Lower Flammable Limit %:	1.1
Autoignition Temperature Deg C:	370

Extinguishing Media:
Use means appropriate for surrounding materials.

Firefighting Techniques/Equipment:
Standard turnout gear ("bunker gear"). Positive-pressure self-contained breathing apparatus.

Hazardous Combustion Products:
Includes carbon dioxide, carbon monoxide, dense smoke.

6. ACCIDENTAL RELEASE MEASURES

Accidental releases may be subject to special reporting requirements and other regulatory mandates. Refer to Section 8 for personal protection equipment recommendations.

Spill Cleanup:
Absorb spill. Common absorbent materials should be effective. Deposit in appropriate containers for removal and disposal.

7. HANDLING AND STORAGE

Storage of some materials is regulated by federal, state, and/or local laws.

Storage Pressure:
Ambient

Handling Procedures:
Keep closed or covered when not in use.

Storage Procedures:
Suitable for most general chemical storage areas.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits:

Component	OSHA PEL (ppm)	AGCIH TWA (ppm)
No hazardous components		

Engineering Controls:
Area ventilation is generally adequate.

Personal Protective Equipment:

Eye:
Safety glasses should be the minimum eye protection.

Skin:
Gloves should be used as minimum hand protection.

Respiratory:
No respiratory protection will be needed under normal industrial operating conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/physical state:	Liquid solution / suspension
Odor:	No odor.
	Not established.
	Not established.
	Not established.
	Not established.
	Not established.
	Not established.
Specific Gravity/Density:	1.00
Octanol/water Partition Coeff:	Not established.
Volatiles:	Not established.
Evaporation Rate:	0.3 (BUTYL ACETATE = 1.0)
Viscosity:	0.98 cp at 20°C

10. STABILITY AND REACTIVITY

Stability:
Stable under ordinary conditions of use and storage.

Conditions to Avoid:
Strong oxidizers.

Hazardous Decomposition Products:

10. STABILITY AND REACTIVITY (CONT.)

Carbon monoxide. Carbon dioxide.

Hazardous Polymerization:
Not expected to occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Dermal/Skin:
Not determined.

Inhalation/Respiratory:
Not determined.

Oral/Ingestion:
Not determined.

Target Organs: No data found.

Carcinogenicity:

NTP:
Not tested.

IARC:
Not listed.

OSHA:
Not regulated.

Other Toxicological Information

12. Ecological Information

Ecotoxicological Information: No ecological information available.

Environmental Fate (Degradation, Transformation, and Persistence):
Bioconcentration is not expected to occur.

13. DISPOSAL CONSIDERATIONS

Regulatory Information:
Not applicable.

13. DISPOSAL CONSIDERATIONS (CONT.)

Disposal Method:
Clean up and dispose of waste in accordance with all federal, state, and local environmental regulations.
Dispose of by incineration following Federal, State, Local, or Provincial regulations.

14. TRANSPORT INFORMATION

Proper Shipping Name: Not regulated.
Subsidiary Hazards:

15. REGULATORY INFORMATION

UNITED STATES:

TSCA:
This product is solely for research and development purposes only and may not be used, processed or distributed for a commercial purpose. It may only be handled by technically qualified individuals.
Materials used in manufacturing processes which are subject to compliance with the Federal Food Drug and Cosmetic Act (FDA) are not subject to the Toxic Substance Control Act (TSCA). The TSCA research use only restriction does not apply to FDA regulated manufacturing processes nor the resulting product per 15 U.S.C. 2602(2).

Prop 65 Listed Chemicals:	PROP 65	PERCENT
No Prop 65 Chemicals.		

No 313 Chemicals

CANADA:

DSL/NDSL:
Not determined.

COMPONENT	WHMIS Classification
No hazardous components	

EUROPEAN UNION:

PRODUCT RISK PHRASES:
None assigned.

PRODUCT SAFETY PHRASES:
Not applicable.

15. REGULATORY INFORMATION (CONT.)

PRODUCT CLASSIFICATION:
N/A

Component	EINECS Number
No hazardous components	

16. OTHER INFORMATION

HMIS Rating 0-4:
FIRE: Not determined.
HEALTH: Not determined.
REACTIVITY: Not determined.

Abbreviations
N/A - Data is not applicable or not available
SARA - Superfund and Reauthorization Act
HMIS - Hazard Material Information System
WHMIS - Workplace Hazard Materials Information System
NTP - National Toxicology Program
OSHA - Occupational Health and Safety Administration
IARC - International Agency for Research on Cancer
PROP 65 - California Safe Drinking Water and Toxic Enforcement Act of 1986
EINECS - European Inventory of Existing Commercial Chemical Substances

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since Invitrogen Corporation cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.