
MATERIAL SAFETY DATA SHEET

THERMOSCRIPT QUANTITATIVE RT-PCR SYSTEM
INVITROGEN CORPORATION
MSDS ID: 11731

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Revised 6/21/02
Replaces 2/14/02
Printed 9/09/02

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

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

Product Name:
THERMOSCRIPT QUANTITATIVE RT-PCR SYSTEM

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.

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
GLYCEROL	56-81-5	30 - 60

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3. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW *****

Caution!
Irritant.

Potential Health Effects:

Eye:
Can cause minor irritation, tearing and reddening.

Skin:
Can cause minor skin irritation, defatting, and dermatitis.

Inhalation:
Can cause minor respiratory irritation, dizziness, weakness, fatigue, nausea, and headache.
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:
Use an eye wash to remove a chemical from your eye regardless of the level of hazard. Flush the affected eye for at least twenty minutes. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Seek medical advice after flushing.

Skin:
Wash with soap and water. Get medical attention if irritation develops or persists.

Inhalation:
Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen.

Ingestion:
Minimal risk of harm if swallowed. Do not induce vomiting. Seek medical attention immediately. Provide medical care provider with this MSDS.

Note To Physician:
Treat symptomatically.

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5. FIRE FIGHTING MEASURES

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

Extinguishing Media:

Use alcohol resistant foam, carbon dioxide, or dry chemical when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire. Do Not direct a stream of water into the hot burning liquid. Use water spray/fog for cooling.

Firefighting Techniques/Equipment:

Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products.

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:

No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section VIII of this MSDS .
Ventilate the contaminated area.
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 VIII at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

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7. HANDLING AND STORAGE

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

Storage Pressure:
Ambient

Handling Procedures:
Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area.
Keep closed or covered when not in use.

Storage Procedures:
Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed.
Suitable for most general chemical storage areas.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits:

Component	OSHA PEL (ppm)	AGCIH TWA (ppm)
GLYCEROL	15	10 MG/M3

Engineering Controls:
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:

Eye:
An eye wash station must be available where this product is used.
Wear chemical goggles.

Skin:
Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene and wear a barrier cream and/or impervious surgical style gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Have a safety shower available.

Respiratory:
NIOSH approved air purifying respirator with dust/mist filter.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/physical state: Colorless liquid. Viscous liquid.
Odor: No odor.
Boiling Point (C): 554 289.97
Melting Point (C): 64.04 17.8
Solubility in water: >=100 mg/L @18C
pH: Not established.
Vapor Pressure: 40 mm Hg @198C
Vapor Density: 3.17
Specific Gravity/Density: 1.261
Octanol/water Partition Coeff: Not established.
Volatiles: Not established.
Evaporation Rate: Not established.
Viscosity: 83% soln

10. STABILITY AND REACTIVITY

Stability:
Stable under normal conditions.

Conditions to Avoid:
Strong oxidizing agents. Temperatures above flash point in combination with sparks, open flames, or other sources of ignition.

Hazardous Decomposition Products:
Carbon monoxide. Carbon dioxide.

Hazardous Polymerization:
Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Dermal/Skin:
Not determined.

Inhalation/Respiratory:
Not determined.

Oral/Ingestion:
Glycerol: 12600 MG/KG

Target Organs: Kidneys.

Carcinogenicity:

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11. TOXICOLOGICAL INFORMATION (CONT.)

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.
Biodegrades quickly.

13. DISPOSAL CONSIDERATIONS

Regulatory Information:
Not applicable.

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: Does not meet the definition of a "hazardous material" for transportation purposes (U.S. DOT).

Hazard Class:
Subsidiary Hazards:
ID Number:
Packing Group:
Label Required: None.

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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.

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

No 313 Chemicals

CANADA:

DSL/NDSL:
Not determined.

COMPONENT	WHMIS Classification
GLYCEROL	D2B

EUROPEAN UNION:

PRODUCT RISK PHRASES: None assigned.
PRODUCT SAFETY PHRASES: None assigned.
PRODUCT CLASSIFICATION: Not classified.

Component	EINECS Number
GLYCEROL	200-289-5

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

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16. OTHER INFORMATION (CONT.)

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.