

# Material Safety Data Sheet

Authorization date: 10/15/2007

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product Name:** PCR sample submission buffer

**Supplier:** Molecular Diagnostics Laboratory  
252A Greene Hall  
Department of Pathobiology  
Auburn University  
Auburn, AL 36849-5519  
Phone Number: 334-844-2648

**Emergency Telephone Number:** CHEMTREC 1-800-424-9300 (U.S. or Canada)  
1-703-527-3887 (International)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %	OSHA PEL:	OSHA STEL:	ACGIH TLV:	ACGIH STEL:
Triton X-100	9002-93-1	20-30%	NA	NA	NA	NA
Urea	57-13-6	<1%	NA	NA	NA	NA
Guanidine Hydrochloride	50-01-1	NF	NA	NA	NA	NA

## 3. HAZARDOUS IDENTIFICATION

### Emergency Overview

**NFPA Ratings:** Health= 1 Flammability= 0 Reactivity= 0 Special= I  
**Special Definitions:** A=Allergen CA=Carcinogen CO=Corrosive F=Flammable H=Harmful I=Irritant Ox=Oxidizer  
PB=Potential Biohazard R=Reproductive S=Sensitizer T=Toxic T+=Highly Toxic W=Water Reactive

**Principle routes of exposure:** Inhalation, Ingestion, Skin and/or Eye contact

**Inhalation:** May irritate respiratory tract

**Ingestion :** Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

**Skin contact:** Causes irritation to skin

**Eye contact:** Moderately irritating to the eyes.

**Sensitization or Odor threshold:** None.

**Medical conditions aggravated by exposure:** None known

**Additional information:** None

## 4. FIRST AID MEASURES

<b>Inhalation:</b>	Consult a physician. Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
<b>Skin contact:</b>	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
<b>Ingestion:</b>	Call a physician immediately. Do not induce vomiting without medical advice.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
<b>Notes to physician:</b>	None determined

## 5. FIRE FIGHTING MEASURES

<b>Suitable extinguishing media:</b>	Use dry chemical, CO2, water spray or "alcohol" foam.
<b>Unusual hazards:</b>	None known.
<b>Special protective equipment for firefighters:</b>	In the event of fire, wear self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Use personal protective equipment. Evacuate personnel to safe areas. Remove all sources of ignition.
<b>Environmental precautions:</b>	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Do not let product enter drains.
<b>Methods for cleaning up:</b>	Never return spills in original containers for re-use. Soak up with oil absorbent material. Sweep up or vacuum (if powder) or soak up with inert absorbent material (if liquid), then place into a suitable clean, dry, closed container, and label for disposal.

## 7. HANDLING AND STORAGE

<b>Handling:</b>	Protect from contamination. Wear personal protective equipment.
<b>Storage:</b>	No special precautions required.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering measures:** Ensure adequate ventilation.

### Personal Protective Equipment

<b>Respiratory protection:</b>	Respiratory protection is not required under normal use of this product. If respiratory protection is needed, follow the OSHA regulation, 29CFR1910.134. Always use a NIOSH approved respirator when necessary.
<b>Hand protection:</b>	Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.
<b>Skin and body protection:</b>	Wear appropriate body protection to prevent skin contact.
<b>Eye protection:</b>	Wear appropriate eye protection to prevent eye contact.
<b>Hygiene measures:</b>	When using, do not eat, drink or smoke. Keep away from food and drink. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Boiling point/range:</b>	No information available
<b>Melting point/range:</b>	Not determined
<b>pH:</b>	Not determined
<b>Physical state:</b>	Liquid.
<b>Flash point:</b>	No information available.
<b>LEL (%):</b>	Not determined
<b>UEL (%):</b>	Not determined
<b>Product name:</b>	PCR sample submission buffer
	No special precautions required. Protect from contamination. Wear personal protective equipment.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under recommended storage conditions.
<b>Polymerization:</b>	None under normal processing.
<b>Hazardous decomposition products:</b>	Thermal decomposition can lead to release of irritating gases and vapours. Carbon monoxide. Nitrogen oxides (nox). Hydrogen chloride.
<b>Materials to avoid:</b>	Incompatible with strong acids and bases. Oxidising agents (strong).

## 11. TOXICOLOGICAL INFORMATION

Components	NIOSH -Selected LD50s and LC50s:	NIOSH Pocket Guide – Target Organs:
Triton X-100	= 1800 mg/kg Oral LD50 Rat	
Urea	= 11 g/kg Oral LD50 Mouse = 8471 mg/kg Oral LD50 Rat	
Guanidine Hydrochloride	= 475 mg/kg Oral LD50 Rat = 571 mg/kg Oral LD50 Mouse	

<b>Inhalation:</b>	No additional data available
<b>Skin:</b>	No additional data available
<b>Oral:</b>	No additional data available
<b>Mutagenic effects:</b>	No additional data available
<b>Reproductive toxicity:</b>	No data is available on the product itself
<b>Carcinogenic effects:</b>	No data is available on the product itself

## 12. ECOLOGICAL INFORMATION

<b>Bioaccumulation:</b>	No data available
<b>Aquatic toxicity:</b>	Not applicable
<b>Ecotoxicity effects:</b>	No data is available on the product itself

## 13. DISPOSAL CONSIDERATIONS

**Waste from residues / unused products:** Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

## 14. TRANSPORT INFORMATION

**Is product hazardous to ship?** No  
**DOT Proper shipping name:** None  
**UN Number:** Not applicable  
**Hazard class:** Not applicable  
**Subsidiary risk:** Not applicable

## 15. REGULATORY INFORMATION

### U.S. Regulations:

**U.S. CERCLA/SARA/TSCA Regulatory Information:** The following chemicals are listed under the following TSCA/SARA/CERCLA lists. Refer to TSCA regulation if you need a definition for acronyms that may be shown in the TSCA Inventory field in the table below:

Components	CERCLA/SARA 302 RQ and TPQ (40 CFR 355, App.A)	CERCLA/SARA 304 RQ (40 CFR Table 302.4)	SARA 313 Emission reporting	TSCA Inventory
Triton X-100				XU
Urea				Present
Guanidine Hydrochloride				Present

**U.S. Clean Water Act (CWA)/ California** Components are not listed under the CWA and/or California Proposition 65.

### **Canadian Regulations:**

**Canada DSL Inventory List:** This product does not comply with DSL  
**Canada NDSL Inventory List:** This product does not comply with NDSL

Components	Canada - WHMIS: Classifications of Substances:
Triton X-100	D2B
Urea	Uncontrolled product according to WHMIS classification criteria.
Guanidine Hydrochloride	D1B; D2B

## 15. OTHER INFORMATION

**Reason for revision:** Not applicable  
**References:** None.  
**Additional advice:** None  
**Prepared by:** Auburn University, Molecular Diagnostics Laboratory, MSDS Contact:334-844-2665

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**End of Safety Data Sheet**