

# Material Safety Data Sheet

Trade name: GXT DNA/RNA Extraction Kit

Date of Issue: May 20, 2010

Revised at: July 26, 2011



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## 1. Identification of the Preparation and of the Company

Trade name: GXT DNA/RNA Extraction Kit (reagent cartridges)  
Product/Catalog Number 12.01.02  
Identification of the company: **Hain Lifescience GmbH**  
**Hardwiesenstr. 1**  
**72147 Nehren, Germany**  
**Tel.: +49 (0) 74 73- 94 51- 0**  
Informing department: Tel.: +49 (0) 74 73- 94 51- 30  
Emergency Phone: Tel.: +49 (0) 74 73- 94 51- 0 (Mon-Fri 8:00-17:00 CET)

## 2. Composition/Information on Ingredients

The reagent cartridges contain different solutions with the following hazardous substances:

<35% (w/w) guanidine thiocyanate [EC No. 209-812-1, CAS No. 593-84-0, Xn, R20/21/22-32-52/53]  
<2% (w/w) triton X-100 [CAS No. 9002-93-1, Xn, Xi, R22-41]  
70-96% (w/w) ethanol [EC No. 200-578-6, CAS No. 64-17-5, F, R11]  
<10% (w/w) citric acid [EC No. 201-069-1, CAS No. 77-92-9, Xi, R36]

Additional information: Full text of R-phrases: see under sections 15 and 16.

## 3. Hazardous Characteristics

Harmful, highly flammable.

Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Contact with acids liberates very toxic gas. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 4. First-Aid Measures

Inhalation: Remove to fresh air.  
Ingestion: Wash out mouth with water. Call a physician.  
Skin contact: Immediately flush skin with plenty of water for at least 15 minutes.  
Remove contaminated clothing.  
Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes.  
Assure adequate flushing by separating the eyelids with fingers. Call a physician.

## 5. Fire-Fighting Measures

Suitable extinguishing media: Water spray, dry chemical powder, carbon dioxide or appropriate foam.  
Special protective equipment for firefighting: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Additional information: Prevent fire-fighting water from entering surface water or groundwater. Vapor is heavier than air. May emit toxic gases or fumes under fire conditions.

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## 6. Accidental Release Measures

Person-related precautionary measures:	Ensure supply of fresh air in enclosed rooms. Avoid substance contact.
Environmental-protection measures:	Prevent product and large volumes of washing water from entering surface water or groundwater. Do not allow to enter sewerage system.
Procedures for cleaning/absorption:	Remove spillage with absorbent material. Dispose of as biohazardous waste and clean up affected area.

## 7. Handling and Storage

Handling:	No further requirements.
Storage:	Keep tightly closed at 15-25°C in a dry, ventilated area away from ignition sources and flammable and toxic substances.
Specific use:	See instructions for use.

## 8. Exposure Limitation and Personal Protective Equipment

Wear suitable protective clothing, gloves, and chemical safety goggles. Wash hands thoroughly after handling.

## 9. Physical and Chemical Properties

Appearance:	liquid
Color:	colorless / brown / yellow
Odor:	odorless
No data available for other parameters.	

## 10. Stability and Reactivity

Stability:	Note expiry date and information in the instructions for use.
Conditions to be avoided:	heating
Substances to be avoided:	strong acids, strong bases, strong oxidizing agents, cyanides
Hazardous decomposition products:	carbon oxides, nitrogen oxides, sulphur oxides, hydrogen cyanides

## 11. Toxicological Information

### Triton X-100 (undiluted)

Acute toxicity:	LD50 (oral, rat, male): 500 mg/kg LD50 (dermal, rat, male): 8000 mg/kg
Skin irritation:	mild irritation (rabbit)
Eye irritation:	severe irritation (rabbit)

### Guanidine thiocyanate

No data available.

### Ethanol (100%)

Acute toxicity:	LD50 (oral, rat): 7660 mg/kg LD50 (inhalation, rat): 20000 ppm/10h
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### Citric acid (100%)

Acute toxicity:	LD50 (oral, rat): 3000 mg/kg
Skin irritation:	mild irritation (rabbit)
Eye irritation:	severe irritation (rabbit)

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## 12. Ecological Information

### Triton X-100 (undiluted)

Fish toxicity: LD50 (Pimephales promelas): 8.9 mg/l /96h  
Daphnia toxicity: EC50 (Daphnia): 26 mg/l /96h  
Biodegradation: readily biodegradable

### Guanidine thiocyanate

No data available.

### Ethanol (100%)

Biodegradation: readily biodegradable

### Citric acid (100%)

Fish toxicity: LD50 (Leuciscus idus): 440 mg/l /48h  
Daphnia toxicity: EC50 (Daphnia): 120 mg/l /72h

## 13. Disposal Considerations

Dispose of unused reagents and waste in accordance with federal, state, and local regulations.

Transfer used cartridges, pipette tips and disposable pumps to a container for biohazardous waste and autoclave before disposal.

## 14. Transport Information

### Land transport (ADR/RID)

Class: 3  
UN no.: 1993  
Packaging group: II  
Description of goods: FLAMMABLE LIQUID, N.O.S. (ETHANOL)

### Maritime transport (IMDG/GGVSee)

Class: 3  
UN no.: 1993  
Packaging group: II  
Description of goods: FLAMMABLE LIQUID, N.O.S. (ETHANOL)

### Air transport (ICAO-TI/IATA-DGR)

Class: 3  
UN no.: 1993  
Packaging group: II  
Description of goods: FLAMMABLE LIQUID, N.O.S. (ETHANOL)  
Category: Excepted Quantity

## 15. Regulatory Information

Labeling: Xn, F  
Designation: harmful, highly flammable  
R-phrases: R11: Highly flammable.  
R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.  
R32: Contact with acids liberates very toxic gas.  
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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S-phrases:	S13:	Keep away from food, drink and animal feedingstuffs.
	S16:	Keep away from sources of ignition - No smoking.
	S36:	Wear suitable protective clothing.
	S61:	Avoid release to the environment. Refer to special instructions/safety data sheet.

## 16. Other Information

The following R-phrases refer to the classification of the components (pure substance, 100%) and not to the classification of the preparation:

R36:	Irritating to eyes.
R41:	Risk of serious damage to eyes.
R51/53:	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The above product is part of an in vitro diagnostic kit and shall be used by trained staff only. The above information is believed to be correct but does not purport to be all inclusive and should be used only as a guide. Hain Lifescience shall not be held liable for any damage or other consequences resulting from handling or from contact with the above product.

This material safety data sheet was prepared according to the guidelines 1999/45/EC and 91/155/EC.

### Changes compared to the previous version of this document

The following sections were changed: 1. Identification of the Preparation and the Company, 11. Toxicological Information, 12. Ecological Information, 13. Disposal Considerations, 16. Other Information.