

# Material Safety Data Sheet



**NORGEN**  
BIOTEK CORPORATION

Lysis Solution Part#21001

## 1 . Product and company identification

**Common name** : 21001  
**Material uses** : Lysis Solution  
**MSDS authored by:** : Kemika XXI Inc. + 1-450- 03/28/2006  
435-7475

### Supplier/Manufacturer

Norgen Biotek Corp.  
344 Merritt St.  
St. Catharines, Ontario  
Canada L2T 1K6  
Tel: (905) 227-8848  
Fax: (905) 227-1061  
Toll Free: 1-866-667-4362

### In case of emergency

CANUTEC (613) 996-6666  
CHEMTREC, U.S. : (800) 424-9300  
International: (703) 527-3887

## 2 . Hazards identification

**Physical state** : Liquid.  
**Hazard status** : This material is classified as not hazardous under the WHMIS in Canada.  
**Emergency overview** : No specific hazard.  
USE WITH CARE.  
Follow good industrial hygiene practice.  
**Routes of entry** : Dermal contact. Eye contact. Inhalation. Ingestion.  
**Potential acute health effects**  
**Eyes** : No known significant effects or critical hazards.  
**Skin** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.  
**Potential chronic health effects** : Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.  
Mutagenic effects: Not available.  
Teratogenic effects: Not available.

See toxicological information (section 11)

## 3 . Composition/information on ingredients

### Canada

Name	CAS number	%
No hazardous ingredient		

## 4 . First aid measures

**Eye contact** : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.  
**Skin contact** : Wash with soap and water. Get medical attention if symptoms occur.  
**Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.  
**Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

- Notes to physician** : No specific antidote. Medical staff must contact Poison Control Center.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

## 5 . Fire-fighting measures

- Flammability of the product** : Non-flammable.
- Extinguishing media**
  - Suitable** : Use an extinguishing agent suitable for the surrounding fire.
  - Not suitable** : None known.
- Special exposure hazards** : No specific hazard.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6 . Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

## 7 . Handling and storage

- Handling** : Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

## 8 . Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

- Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control airborne levels. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

### Personal protection

- Eyes** : Safety glasses.
- Skin** : Lab coat.
- Respiratory** : A respirator is not needed under normal and intended conditions of product use.
- Hands** : Disposable vinyl gloves.



- Personal protection in case of a large spill** : Safety glasses, goggles or face shield. Impervious gloves. Full suit. Boots. Wear NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear. Wash hands, forearms and face thoroughly after handling compounds and before eating, smoking and using the lavatory and at the end of the day. Follow good industrial hygiene practice.

## 9 . Physical and chemical properties

<b>Physical state</b>	: Liquid.
<b>pH</b>	: Acidic.
<b>Boiling/condensation point</b>	: The lowest known value is 100°C (212°F) (Water).
<b>Melting/freezing point</b>	: May start to solidify at 0°C (32°F) based on data for: Water.
<b>Relative density</b>	: Weighted average: 1.04 (Water = 1)
<b>Vapor pressure</b>	: The highest known value is 2.3 kPa (17.5 mm Hg) (at 20°C) (Water).
<b>Vapor density</b>	: The highest known value is 0.62 (Air = 1) (Water).
<b>Evaporation rate</b>	: 0.36 (Water) compared with Butyl acetate.
<b>Solubility</b>	: Easily soluble in cold water, hot water, methanol, acetone.

## 10 . Stability and reactivity

<b>Stability and reactivity</b>	: The product is stable.
<b>Incompatibility with various substances</b>	: Reactive with oxidizing materials, metals, acids and alkalis.
<b>Hazardous polymerization</b>	: Will not occur.

## 11 . Toxicological information

### Acute Effects

<b>Eyes</b>	: No known significant effects or critical hazards.
<b>Skin</b>	: No known significant effects or critical hazards.
<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Ingestion</b>	: No known significant effects or critical hazards.

<b>Potential chronic health effects</b>	: Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH. Mutagenic effects: Not available. Teratogenic effects: Not available.
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## 12 . Ecological information

<b>Environmental precautions</b>	: No known significant effects or critical hazards.
<b>Products of degradation</b>	: These products are carbon oxides and water, nitrogen oxides. Some metallic oxides.
<b>Toxicity of the products of biodegradation</b>	: The product itself and its products of degradation are not toxic.

## 13 . Disposal considerations

<b>Waste disposal</b>	: The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements.
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## 14 . Transport information

Not applicable.

### Regulatory information

UN/ IMDG/IATA TDG : Not regulated by any transport mode.

## 15 . Regulatory information

### Canada

WHMIS (Canada) : Not regulated.  
 DSL : All components listed.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

International lists : This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

## 16 . Other information

Hazardous Material Information System (U.S.A.) :

### HMIS RATING

Health	1
Fire hazard	0
Physical Hazard	0
Personal protection	C

### HAZARD RATINGS

4- Extreme  
 3- Serious  
 2- Moderate  
 1- Slight  
 0- Minimal

National Fire Protection Association (U.S.A.) :



### References

: ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005.

Date of issue :

03/28/2006

Version :

1

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

# Material Safety Data Sheet

Binding Solution Part #21002



**NORGEN**  
BIOTEK CORPORATION

## 1 . Product and company identification

**Common name** : 21002  
**Material uses** : Bysis Solution  
**MSDS authored by:** : Kemika XXI Inc. + 1-450- 03/28/2006  
435-7475

**Supplier/Manufacturer**

Norgen Biotek Corp.  
344 Merritt St.  
St. Catharines, Ontario  
Canada L2T 1K6  
Tel: (905) 227-8848  
Fax: (905) 227-1061  
Toll Free: 1-866-667-4362

**In case of emergency**

CANUTEC (613) 996-6666  
CHEMTREC, U.S. : (800) 424-9300  
International: (703) 527-3887

## 2 . Hazards identification

**Physical state** : Liquid.  
**Hazard status** : This material is classified hazardous under the WHMIS Controlled Product Regulation in Canada.  
**Emergency overview** : No specific hazard.  
Not applicable.  
Not applicable.  
**Routes of entry** : Dermal contact. Eye contact. Inhalation. Ingestion.  
**Potential acute health effects**  
**Eyes** : No known significant effects or critical hazards.  
**Skin** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.  
**Potential chronic health effects** : Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.  
Mutagenic effects: Not available.  
Teratogenic effects: Not available.

See toxicological information (section 11)

## 3 . Composition/information on ingredients

Canada			
Name		CAS number	%
No hazardous ingredient			

## 4 . First aid measures

**Eye contact** : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.  
**Skin contact** : Wash with soap and water. Get medical attention if symptoms occur.  
**Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.  
**Ingestion** : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

- Notes to physician** : No specific antidote. Medical staff must contact Poison Control Center.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

## 5 . Fire-fighting measures

- Flammability of the product** : Non-flammable.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
  - Not suitable** : None known.
- Special exposure hazards** : No specific hazard.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6 . Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

## 7 . Handling and storage

- Handling** : Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

## 8 . Exposure controls/personal protection

**Consult local authorities for acceptable exposure limits.**

- Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control airborne levels. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

### Personal protection

- Eyes** : Safety glasses.
- Skin** : Lab coat.
- Respiratory** : A respirator is not needed under normal and intended conditions of product use.
- Hands** : Rubber gloves.



- Personal protection in case of a large spill** : Safety glasses, goggles or face shield. Impervious gloves. Full suit. Boots. Wear NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear. Wash hands, forearms and face thoroughly after handling compounds and before eating, smoking and using the lavatory and at the end of the day. Follow good industrial hygiene practice.

## 9 . Physical and chemical properties

<b>Physical state</b>	: Liquid.
<b>pH</b>	: Neutral.
<b>Boiling/condensation point</b>	: The lowest known value is 100°C (212°F) (Water).
<b>Melting/freezing point</b>	: May start to solidify at 0°C (32°F) based on data for: Water.
<b>Relative density</b>	: The only known value is 1 (Water = 1) (Water).
<b>Vapor pressure</b>	: The highest known value is 2.3 kPa (17.5 mm Hg) (at 20°C) (Water).
<b>Vapor density</b>	: The highest known value is 0.62 (Air = 1) (Water).
<b>Evaporation rate</b>	: 0.36 (Water) compared with Butyl acetate.
<b>Solubility</b>	: Easily soluble in cold water, hot water, methanol, acetone.

## 10 . Stability and reactivity

<b>Stability and reactivity</b>	: The product is stable.
<b>Incompatibility with various substances</b>	: Reactive with oxidizing materials.
<b>Hazardous polymerization</b>	: Will not occur.

## 11 . Toxicological information

### Acute Effects

<b>Eyes</b>	: No known significant effects or critical hazards.
<b>Skin</b>	: No known significant effects or critical hazards.
<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Ingestion</b>	: No known significant effects or critical hazards.
<b>Potential chronic health effects</b>	: Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH. Mutagenic effects: Not available. Teratogenic effects: Not available.

## 12 . Ecological information

<b>Environmental precautions</b>	: No known significant effects or critical hazards.
<b>Products of degradation</b>	: These products are carbon oxides and water, nitrogen oxides, sulfur oxides.
<b>Toxicity of the products of biodegradation</b>	: The products of degradation are less toxic than the product itself.

## 13 . Disposal considerations

<b>Waste disposal</b>	: The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements.
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## 14 . Transport information

**NAERG** : Not applicable.

### Regulatory information

**UN/ IMDG/IATA TDG** : Not regulated by any transport mode.

## 15 . Regulatory information

### Canada

**WHMIS (Canada)** : Not controlled under WHMIS (Canada).  
 DSL : All components listed.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**International lists** : This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

## 16 . Other information

**Hazardous Material Information System (U.S.A.)** :

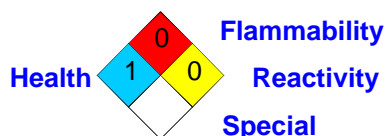
### HMIS RATING

Health	1
Fire hazard	0
Physical Hazard	0
Personal protection	C

### HAZARD RATINGS

4- Extreme  
 3- Serious  
 2- Moderate  
 1- Slight  
 0- Minimal

**National Fire Protection Association (U.S.A.)** :



**References** : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005.

**Date of issue** : 03/28/2006  
**Version** : 1

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## Norgen PCR Purification Kit

### 1. Identification of the substance/preparation and of the company/undertaking

**Product name** : Norgen PCR Purification Kit

**Manufacturer** : Norgen Biotek Corp.  
344 Merritt St.  
St. Catharines, Ontario  
Canada L2T 1K6  
Tel: (905) 227-8848  
Fax: (905) 227-1061

**Chemical product name** : Not applicable.

**Supplier** : Norgen Biotek Corp.  
344 Merritt St.  
St. Catharines, Ontario  
Canada L2T 1K6  
Tel: (905) 227-8848  
Fax: (905) 227-1061

**Synonyms** : Not available.

**Chemical Formula** : Not applicable.

**Emergency telephone number** : Canada:  
CANUTEC-1-613-996-6666  
US:  
CHEMTREC-1-800-424-9300

**Material Uses** : Wash solution.

**Catalog#**  
**P/N 14402;**

### 2. Composition/information on ingredients

**Substance/Preparation** : Preparation.

Chemical name	CAS No.	%	EC Number	Classification
United States				
Germany				
United Kingdom (UK)				
Japan				
Canada				

This material is classified as non-hazardous under the United States OSHA regulation, the European DSD/DPD Directives and several countries specific requirements, in Japan and under the Canadian WHMIS regulation.

### 3. Hazards identification

**Physical State and Appearance** : Liquid. (Clear.)

**Emergency Overview** : No specific hazard.  
USE WITH CARE.  
Follow good industrial hygiene practice.

**Routes of Entry** : Dermal contact. Eye contact. Inhalation. Ingestion.  
The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

**Effects and symptoms**

**Skin Contact** : Slightly hazardous in case of skin contact (irritant). Non-sensitizer for skin.

**Eye Contact** : Slightly hazardous in case of eye contact (irritant).

**Aggravating conditions** : Repeated or prolonged exposure is not known to aggravate medical condition.

## 4. First aid measures

### First-Aid measures

- Inhalation** : If inhaled, remove to fresh air. Get medical attention if symptoms appear.
- Ingestion** : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.
- Skin Contact** : Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
- Eye Contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.
- Notes to physician** : No specific antidote. Medical staff must contact Poison Information Center.
- Protection of first-aiders** : Not available.

## 5. Fire-fighting measures

### Extinguishing Media

- Suitable** : Use extinguishing media suitable for surrounding materials.
- Unsuitable.** : Not applicable.
- Unusual fire/explosion hazards** : Not applicable.
- Hazardous thermal decomposition products** : Not applicable.
- Special fire-fighting procedures** : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
- Protection of fire-fighters** : Not applicable.

## 6. Accidental release measures

- Personal precautions** : Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist before handling this product.
- Environmental Precautions and Clean-up Methods** : Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Note: See section 8 for personal protective equipment and section 13 for waste disposal.

## 7. Handling and storage

- Handling** : Avoid contact with eyes. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible. Keep away from incompatibles such as oxidizing agents.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area. Preferred storage temperature is 4°C. For long-term storage keep at -20°C.
- Germany - Storage Code** : Not available.

## 8. Exposure controls/personal protection

- Engineering measures** : Good general ventilation should be sufficient to control airborne levels.
- Hygiene measures** : Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
<b>United States</b>	1) None assigned.
<b>Germany</b>	1) None assigned.
<b>United Kingdom (UK)</b>	1) None assigned.
<b>Japan</b>	1) None assigned.
<b>Canada</b>	1) None assigned.

- Recommended monitoring procedures** : Not available.

### Personal protective equipment

- Skin and body** : Lab coat.
- Eyes** : Safety glasses.

## 9. Physical and chemical properties

<b>Physical state</b>	: Liquid. (Clear.)
<b>Color</b>	: Colorless.
<b>Odor</b>	: Odorless.
<b>pH</b>	: 8.5 [Basic.]
<b>Boiling Point</b>	: The lowest known value is 99.9°C (211.8°F) (Water).
<b>Melting Point</b>	: May start to solidify at -0.1°C (31.8°F) based on data for: Water.
<b>Flash point</b>	: Not applicable.
<b>Explosive properties</b>	: Risks of explosion of the product in presence of mechanical impact: Not applicable. Risks of explosion of the product in presence of static discharge: Not applicable.
<b>Vapor Pressure</b>	: The highest known value is 2.3 kPa (17.5 mm Hg) (at 20°C) (Water).
<b>Density</b>	: The only known value is 1 (Water = 1) (Water).
<b>Solubility</b>	: Miscible in water.
<b>Vapor Density</b>	: The highest known value is 0.62 (Air = 1) (Water).

## 10. Stability and reactivity

<b>Stability</b>	: The product is stable at room temperature.
<b>Conditions to avoid</b>	: The product is unstable at a temperature above 37°C. See Section 7 for storage conditions.
<b>Materials to avoid</b>	: Reactive with oxidizing agents.
<b>Hazardous Decomposition Products</b>	: Not applicable.

## 11. Toxicological information

### Acute toxicity

<u>Ingredient Name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
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**Skin irritation** : Slightly hazardous in case of skin contact (irritant).

**Eye irritation** : Slightly hazardous in case of eye contact (irritant).

**Sensitization** : Non-sensitizer for skin.

### Chronic toxicity

: Repeated or prolonged exposure is not known to aggravate medical condition.

**Carcinogenic Effects** : Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

**Mutagenic Effects** : Not available.

**Reproduction toxicity** : Not available.

**Developmental and Teratogenic Effects** : Not available.

**To the best of our knowledge, the toxicological properties of this substance have not been investigated thoroughly.**

## 12. Ecological information

### Ecotoxicity Data

<u>Ingredient Name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
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**Mobility** : Not available.

**Persistence/degradability** : Not available.

**Bioaccumulative potential** : Not available.

**Soil/Water Partition Coefficient (K<sub>ow</sub>)** : Not available.

## 13. Disposal considerations

<b>Methods of disposal</b>	: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
<b>Waste Classification</b>	: Not applicable.
<b>European Waste Catalogue (EWC)</b>	: Not available.
<b>Hazardous Waste</b>	: To present knowledge of the supplier, this product is not regarded as hazardous waste as defined by EU Directive 91/689/EC.

## 14. Transport information

### International transport regulations

<b>Regulatory Information</b>	<b>Classification</b>
<b>DOT (United States)</b>	Not regulated.
<b>ADR/RID (Europe)</b>	Not regulated.
<b>ADN (Europe)</b>	Not regulated.
<b>Road Law (Japan)</b>	Not regulated.
<b>TDG (Canada)</b>	Not regulated.
<b>IATA-DGR</b>	Not regulated.
<b>IMDG</b>	Not regulated.

## 15. Regulatory information

**HCS (United States)** : Not controlled under the HCS (United States).  
**U.S. Federal Regulations** : TSCA 8(b) inventory: All components listed.  
SARA 302/304/311/312 extremely hazardous substances: No products were found.  
SARA 302/304 emergency planning and notification: No products were found.  
SARA 302/304/311/312 hazardous chemicals: No products were found.  
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.  
Clean Water Act (CWA) 307: No products were found.  
Clean Water Act (CWA) 311: No products were found.  
Clean air act (CAA) 112 accidental release prevention: No products were found.  
Clean air act (CAA) 112 regulated flammable substances: No products were found.  
Clean air act (CAA) 112 regulated toxic substances: No products were found.

### SARA 313

**Form R - Reporting Requirements** : No products were found.

**Supplier Notification** : No products were found.

**State Regulations** :  
California prop. 65: No products were found.

### EU Regulations

**Product Use** : Classification and labeling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use.  
- Industrial applications.

### National regulations

#### Germany

**Ordinance on Combustible Liquids** : Class: Omitted

**Hazard class for water (GWK)** : 1

#### United Kingdom (UK)

**VOC Content (Retail Use)** : Not applicable.

**VOC Content (Industrial Use)** : Contains 0 wt% VOC.

**Japan Control Laws** : Not applicable.

**WHMIS (Canada)** : Not controlled under WHMIS (Canada).  
DSL/NDSL: All components listed.

**This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.**

## 16. Other information

**US Label Requirements** : USE WITH CARE.

**Hazardous Material  
Information System  
(U.S.A.)**

Health	0
Fire Hazard	0
Reactivity	0
Personal Protection	C

**National Fire  
Protection  
Association  
(U.S.A.)**



Europe Label :  
Japan Label : Not applicable.  
WHMIS Label :

**HISTORY**

Date of printing : 2004-11-12.  
Date of issue : 2004-11-12.  
Date of Previous Issue : No Previous Validation.  
Version : 1  
Prepared by : Kemika XXI inc.

**Notice to Reader**

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## Norgen PCR Purification Kit

### 1. Identification of the substance/preparation and of the company/undertaking

**Product name** : Norgen PCR Purification Kit

**Manufacturer** : Norgen Biotek Corp.  
344 Merritt St.  
St. Catharines, Ontario  
Canada L2T 1K6  
Tel: (905) 227-8848  
Fax: (905) 227-1061

**Chemical product name** : Not applicable.

**Supplier** : Norgen Biotek Corp.  
344 Merritt St.  
St. Catharines, Ontario  
Canada L2T 1K6  
Tel: (905) 227-8848  
Fax: (905) 227-1061

**Synonyms** : Not available.

**Chemical Formula** : Not applicable.

**Emergency telephone number** : Canada:  
CANUTEC-1-613-996-6666  
US:  
CHEMTREC-1-800-424-9300

**Material Uses** : Elution buffer.

**Catalog#**  
**P/N 14403;**

### 2. Composition/information on ingredients

**Substance/Preparation** : Preparation.

Chemical name	CAS No.	%	EC Number	Classification
United States				
Germany				
United Kingdom (UK)				
Japan				
Canada				

This material is classified as non-hazardous under the United States OSHA regulation, the European DSD/DPD Directives and several countries specific requirements, in Japan and under the Canadian WHMIS regulation.

### 3. Hazards identification

**Physical State and Appearance** : Liquid. (Clear.)

**Emergency Overview** : No specific hazard.  
USE WITH CARE.  
Follow good industrial hygiene practice.

**Routes of Entry** : Dermal contact. Eye contact. Inhalation. Ingestion.  
The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

**Effects and symptoms**

**Skin Contact** : Slightly hazardous in case of skin contact (irritant). Non-sensitizer for skin.

**Eye Contact** : Slightly hazardous in case of eye contact (irritant).

**Aggravating conditions** : Repeated or prolonged exposure is not known to aggravate medical condition.

## 4. First aid measures

### First-Aid measures

- Inhalation** : If inhaled, remove to fresh air. Get medical attention if symptoms appear.
- Ingestion** : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.
- Skin Contact** : Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
- Eye Contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.
- Notes to physician** : No specific antidote. Medical staff must contact Poison Information Center.
- Protection of first-aiders** : Not available.

## 5. Fire-fighting measures

### Extinguishing Media

- Suitable** : Use extinguishing media suitable for surrounding materials.
- Unsuitable.** : Not applicable.
- Unusual fire/explosion hazards** : Not applicable.
- Hazardous thermal decomposition products** : Not applicable.
- Special fire-fighting procedures** : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
- Protection of fire-fighters** : Not applicable.

## 6. Accidental release measures

- Personal precautions** : Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist before handling this product.
- Environmental Precautions and Clean-up Methods** : Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

**Note:** See section 8 for personal protective equipment and section 13 for waste disposal.

## 7. Handling and storage

- Handling** : Avoid contact with eyes. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible. Keep away from incompatibles such as oxidizing agents.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area. Preferred storage temperature is 4°C. For long-term storage keep at -20°C.
- Germany - Storage Code** : Not available.

## 8. Exposure controls/personal protection

- Engineering measures** : Good general ventilation should be sufficient to control airborne levels.
- Hygiene measures** : Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
<b>United States</b>	1) None assigned.
<b>Germany</b>	1) None assigned.
<b>United Kingdom (UK)</b>	1) None assigned.
<b>Japan</b>	1) None assigned.
<b>Canada</b>	1) None assigned.

- Recommended monitoring procedures** : Not available.

### Personal protective equipment

- Skin and body** : Lab coat.
- Eyes** : Safety glasses.

## 9. Physical and chemical properties

<b>Physical state</b>	: Liquid. (Clear.)
<b>Color</b>	: Colorless.
<b>Odor</b>	: Odorless.
<b>pH</b>	: 8.5 [Basic.]
<b>Boiling Point</b>	: The lowest known value is 99.9°C (211.8°F) (Water).
<b>Melting Point</b>	: May start to solidify at -0.1°C (31.8°F) based on data for: Water.
<b>Flash point</b>	: Not applicable.
<b>Explosive properties</b>	: Risks of explosion of the product in presence of mechanical impact: Not applicable. Risks of explosion of the product in presence of static discharge: Not applicable.
<b>Vapor Pressure</b>	: The highest known value is 2.3 kPa (17.5 mm Hg) (at 20°C) (Water).
<b>Density</b>	: The only known value is 1 (Water = 1) (Water).
<b>Solubility</b>	: Miscible in water.
<b>Vapor Density</b>	: The highest known value is 0.62 (Air = 1) (Water).

## 10. Stability and reactivity

<b>Stability</b>	: The product is stable at room temperature.
<b>Conditions to avoid</b>	: The product is unstable at a temperature above 37°C. See Section 7 for storage conditions.
<b>Materials to avoid</b>	: Reactive with oxidizing agents.
<b>Hazardous Decomposition Products</b>	: Not applicable.

## 11. Toxicological information

### Acute toxicity

<u>Ingredient Name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
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**Skin irritation** : Slightly hazardous in case of skin contact (irritant).

**Eye irritation** : Slightly hazardous in case of eye contact (irritant).

**Sensitization** : Non-sensitizer for skin.

### Chronic toxicity

: Repeated or prolonged exposure is not known to aggravate medical condition.

**Carcinogenic Effects** : Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

**Mutagenic Effects** : Not available.

**Reproduction toxicity** : Not available.

**Developmental and Teratogenic Effects** : Not available.

**To the best of our knowledge, the toxicological properties of this substance have not been investigated thoroughly.**

## 12. Ecological information

### Ecotoxicity Data

<u>Ingredient Name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
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**Mobility** : Not available.

**Persistence/degradability** : Not available.

**Bioaccumulative potential** : Not available.

**Soil/Water Partition Coefficient (K<sub>ow</sub>)** : Not available.

## 13. Disposal considerations

<b>Methods of disposal</b>	: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
<b>Waste Classification</b>	: Not applicable.
<b>European Waste Catalogue (EWC)</b>	: Not available.
<b>Hazardous Waste</b>	: To present knowledge of the supplier, this product is not regarded as hazardous waste as defined by EU Directive 91/689/EC.

## 14. Transport information

### International transport regulations

<b>Regulatory Information</b>	<b>Classification</b>
<b>DOT (United States)</b>	Not regulated.
<b>ADR/RID (Europe)</b>	Not regulated.
<b>ADN (Europe)</b>	Not regulated.
<b>Road Law (Japan)</b>	Not regulated.
<b>TDG (Canada)</b>	Not regulated.
<b>IATA-DGR</b>	Not regulated.
<b>IMDG</b>	Not regulated.

## 15. Regulatory information

**HCS (United States)** : Not controlled under the HCS (United States).  
**U.S. Federal Regulations** : TSCA 8(b) inventory: All components listed.  
SARA 302/304/311/312 extremely hazardous substances: No products were found.  
SARA 302/304 emergency planning and notification: No products were found.  
SARA 302/304/311/312 hazardous chemicals: No products were found.  
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.  
Clean Water Act (CWA) 307: No products were found.  
Clean Water Act (CWA) 311: No products were found.  
Clean air act (CAA) 112 accidental release prevention: No products were found.  
Clean air act (CAA) 112 regulated flammable substances: No products were found.  
Clean air act (CAA) 112 regulated toxic substances: No products were found.

### SARA 313

**Form R - Reporting Requirements** : No products were found.

**Supplier Notification** : No products were found.

**State Regulations** :  
California prop. 65: No products were found.

### EU Regulations

**Product Use** : Classification and labeling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use.  
- Industrial applications.

### National regulations

#### Germany

**Ordinance on Combustible Liquids** : Class: Omitted

**Hazard class for water (GWK)** : 1

#### United Kingdom (UK)

**VOC Content (Retail Use)** : Not applicable.

**VOC Content (Industrial Use)** : Contains 0 wt% VOC.

**Japan Control Laws** : Not applicable.

**WHMIS (Canada)** : Not controlled under WHMIS (Canada).  
DSL/NDSL: All components listed.

**This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.**

## 16. Other information

**US Label Requirements** : USE WITH CARE.

**Hazardous Material  
Information System  
(U.S.A.)**

Health	0
Fire Hazard	0
Reactivity	0
Personal Protection	C

**National Fire  
Protection  
Association  
(U.S.A.)**



Europe Label :  
Japan Label : Not applicable.  
WHMIS Label :

HISTORY

Date of printing : 2004-11-12.  
Date of issue : 2004-11-12.  
Date of Previous Issue : No Previous Validation.  
Version : 1  
Prepared by : Kemika XXI inc.

Notice to Reader

*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*

# SAFETY DATA SHEET



## Spin Columns (Silicon Carbide)

### 1. Identification of the substance/preparation and of the company/undertaking

**Product name** : Spin Columns (Silicon Carbide) **Manufacturer** : Norgen Biotek Corp.  
344 Merritt St.  
St. Catharines, Ontario  
Canada L2T 1K6  
Tel: (905) 227-8848  
Fax: (905) 227-1061

**Chemical product name** : Not applicable. **Supplier** : Norgen Biotek Corp.  
344 Merritt St.  
St. Catharines, Ontario  
Canada L2T 1K6  
Tel: (905) 227-8848  
Fax: (905) 227-1061

**Synonyms** : Not available. **Emergency telephone number** : Canada: CANUTEC-1-613-996-6666  
US: CHEMTREC-1-800-424-9300

**Chemical Formula** : Not applicable.

**Material Uses** : Spin columns (filled with silicon carbide).  
**Catalog#**

PS-CM25-0015.  
PS-CM25-0008.  
PS-CM25-0001.

### 2. Composition / information on ingredients

**Substance/Preparation** : Preparation.

Chemical name	CAS No.	%	EC Number	Classification
<b>United States</b> 1) Silicon Carbide	409-21-2	70-100	206-991-8	Not applicable.
<b>Germany</b> 1) Silicon Carbide	409-21-2	70-100	206-991-8	Not applicable.
See Section 16 for the full text of the R Phrases declared above				
<b>United Kingdom (UK)</b> 1) Silicon Carbide	409-21-2	70-100	206-991-8	Not applicable.
<b>Japan</b> 1) Silicon Carbide	409-21-2	70-100	Listed on METI.	Not applicable.
<b>Canada</b> 1) Silicon Carbide	409-21-2	70-100	206-991-8	Not applicable.

This material is classified as non-hazardous under the United States OSHA regulation, the European DSD/DPD Directives and several countries specific requirements, in Japan and under the Canadian WHMIS regulation.

See Section 8 for Exposure Limits.  
See Section 11 for Toxicological Data.  
See Section 14 for UN Number.

### 3. Hazards identification

**Physical State and Appearance** : Solid. (Powdered solid.)

**Emergency Overview** : No specific hazard.  
USE WITH CARE  
Do not breathe dust.

**Routes of Entry** : Inhalation.

The substance is not classified as dangerous according to Directive 2001/59/EC.

**Classification in Europe** :

#### Effects and symptoms

**Inhalation** : Slightly hazardous in case of inhalation (lung irritant). Can cause silicosis.  
**Skin Contact** : Slightly hazardous in case of skin contact (irritant). Non-sensitizer for skin.  
**Eye Contact** : Non-irritating to the eyes.  
**Aggravating conditions** : Repeated or prolonged exposure may aggravate medical condition. Do not break container and avoid breathing dust.

**4. First-aid measures**

First-Aid measures

- Inhalation** : If inhaled, remove to fresh air. Get medical attention if symptoms appear.
- Ingestion** : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.
- Skin Contact** : Wash with soap and water. Get medical attention if irritation develops. Cold water may be used.
- Eye Contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention if irritation occurs.
- Notes to physician** : Not available.
- Protection of first-aiders** : Not available.

**5. Fire-fighting measures**

Extinguishing Media

- Suitable** : Use extinguishing media suitable for surrounding materials.
- Unsuitable.** : Not available.
- Unusual fire/explosion hazards** : Not available.
- Hazardous thermal (de)composition products** : Not applicable.
- Special fire-fighting procedures** : Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
- Protection of fire-fighters** : Not applicable.

**6. Accidental release measures**

- Personal precautions** : Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist before handling this product.
- Environmental Precautions and Clean-up Methods** : Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Note: See section 8 for personal protective equipment and section 13 for waste disposal.

**7. Handling and storage**

- Handling** : Do not breathe dust. Keep away from incompatibles such as oxidizing agents, acids.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.
- Germany - Storage Code** : Not available.

**8. Exposure controls/personal protection**

- Engineering measures** : Good general ventilation should be sufficient to control airborne levels.
- Hygiene measures** : Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
<b>United States</b>	
1) Silicon Carbide	<p><b>ACGIH TLV (United States, 2001). Notes: 1996 Adoption The value is for total dust containing no asbestos and &lt; 1% crystalline silica. Refers to Appendix A – Carcinogens.</b>                      TWA: 10 mg/m<sup>3</sup></p> <p><b>NIOSH REL (United States, 2001).</b>                      TWA: 5 mg/m<sup>3</sup> Period: 10 hour(s). Form: Respirable fraction</p> <p><b>OSHA PEL (United States, 1971).</b>                      TWA: 5 MGM3 Form: Respirable fraction                      TWA: 15 MGM3 Form: Total dust</p> <p><b>OSHA PEL 1989 (United States, 1989).</b>                      TWA: 5 mg/m<sup>3</sup> Form: Respirable fraction                      TWA: 10 mg/m<sup>3</sup> Form: Total dust</p>
<b>Germany</b>	
1) Silicon Carbide	Not available.
<b>United Kingdom (UK)</b>	
1) Silicon Carbide	Not available.
<b>Japan</b>	
1) Silicon Carbide	Not available.
<b>Canada</b>	
1) Silicon Carbide	Not available.

- Recommended monitoring procedures** : Not available.

Personal protective equipment

- Respiratory system** : Dust respirator. Be sure to use an approved/certified respirator or equivalent.
- Skin and body** : Lab coat.
- Hands** : Gloves.
- Eyes** : Safety glasses.

## 9. Physical and chemical properties

Physical state	: Solid. (Powdered solid.)
Color	: Grey.
Odor	: Odorless.
pH	: Not applicable.
Flash point	: Not applicable.
Explosive properties	: Risks of explosion of the product in presence of mechanical impact: Not applicable. Risks of explosion of the product in presence of static discharge: Not applicable.
Density	: The only known value is 3.23 (Water = 1) (Silicon Carbide).
Solubility	: Insoluble in cold water, hot water.

## 10. Stability and reactivity

Stability	: The product is stable at room temperature.
Conditions to avoid	: Not available.
Materials to avoid	: Reactive with oxidizing agents, acids.
Hazardous Decomposition Products	: Not applicable.

## 11. Toxicological information

### Acute toxicity

<u>Ingredient Name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Silicon Carbide	Not available.	Not available.	Not available.	Not available.

Skin irritation	: Non-irritant for skin.
Eye irritation	: Hazardous in case of eye contact (irritant).

Sensitization	: Non-sensitizer for skin.
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Chronic toxicity : Repeated or prolonged exposure may aggravate medical condition. Do not break container and avoid breathing dust.

Carcinogenic Effects : Not available.

Mutagenic Effects : Not available.

Reproduction toxicity : Not available.

Developmental and Teratogenic Effects : Not available.

## 12. Ecological information

### Ecotoxicity Data

<u>Ingredient Name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
Silicon Carbide	Not available.	Not available.	Not available.

Mobility	: Not available.
Persistence/degradability	: Not available.
Bioaccumulative potential	: Not available.
Soil/Water Partition Coefficient ( $K_{oc}$ )	: Not available.

## 13. Disposal considerations

Methods of disposal	: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Classification	: Not applicable.
European Waste Catalogue (EWC)	: Not available.
Hazardous Waste	: To present knowledge of the supplier, this product is not regarded as hazardous waste as defined by EU Directive 94/904/EC.

## 14. Transport information

### International transport regulations

## Spin Columns (Silicon Carbide)

### Regulatory Information

### Classification

DOT (United States)	Not regulated.
ADR/RID (Europe)	Not regulated.
ADN (Europe)	Not regulated.
Road Law (Japan)	Not regulated.
TDG (Canada)	Not regulated.
IATA-DGR	Not regulated.
IMDG	Not regulated.

## 15. Regulatory information

<b>HCS (United States)</b>	: Not controlled under the HCS (United States).
<b>U.S. Federal Regulations</b>	: TSCA 8(b) inventory: Components listed. SARA 302/304/311/312 extremely hazardous substances: No ingredient was found. SARA 302/304 emergency planning and notification: No ingredient was found. SARA 302/304/311/312 hazardous chemicals: Silicon Carbide SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Silicon Carbide: Immediate (Acute) Health Hazard SARA 313 toxic chemical notification and release reporting: No ingredient was found. Clean Water Act (CWA) 307: No ingredient was found. Clean Water Act (CWA) 311: No ingredient was found. Clean Air Act (CAA) 112 accidental release prevention: No ingredient was found. Clean Air Act (CAA) 112 regulated flammable substances: No ingredient was found. Clean Air Act (CAA) 112 regulated toxic substances: No ingredient was found.
<b>State Regulations</b>	: Pennsylvania RTK: Silicon Carbide: (generic environmental hazard) Massachusetts RTK: Silicon Carbide New Jersey: Silicon Carbide California Prop. 65: No ingredient was found.

### EU Regulations

<b>Risk Phrases</b>	: This product is not classified according to the EU regulations.
<b>Safety Phrases</b>	: Not applicable.
<b>Contains</b>	: No hazardous ingredients at or above concentration to be considered.
<b>Product Use</b>	: Classification and labeling have been performed according to EU directives 67/548/EEC, 88/379/EEC including amendments and the intended use. - Consumer applications.

### National regulations

#### Germany

<b>Ordinance on Combustible Liquids</b>	: Class: Omitted
<b>Hazard class for water (GWK)</b>	: 1

#### United Kingdom (UK)

<b>VOC Content (Retail Use)</b>	: Not applicable.
<b>VOC Content (Industrial Use)</b>	: Contains 0 wt% VOC.

**Japan Control Laws** : Contains no substances that is considered hazardous at the present concentration level.

**WHMIS (Canada)** : Not controlled under WHMIS (Canada).  
DSL/NDSL: Components listed.

**This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.**

16. Other information

US Label Requirements : USE WITH CARE

Hazardous Material Information System (U.S.A.)

Health	1
Fire Hazard	0
Reactivity	0
Personal Protection	E

National Fire Protection Association (U.S.A.)



Europe Label :

Japan Label : Contains no substances that is considered hazardous at the present concentration level.

WHMIS Label :

HISTORY

Date of printing : 3/26/2003.  
Date of issue : 3/26/2003.  
Date of Previous Issue : No Previous Validation.  
Version : 1  
Prepared by : Kemika XXI inc.

Notice to Reader

*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*