

Material Safety Data Sheet

Material Name: Erase Sperm Isolation Kit

*** Section 1 - Chemical Product and Company Identification ***

Manufacturer Information

Paternity Testing Corporation
300 Portland Street
Columbia, MO 65201

Phone: 573-442-9948
Fax: 573-442-9870

*** Section 2 - Hazards Identification ***

Emergency Overview

No hazards anticipated under normal product use conditions.

Potential Health Effects: Eyes

May cause irritation.

Potential Health Effects: Skin

May cause irritation.

Potential Health Effects: Ingestion

Not considered a likely route of exposure under normal product use conditions. May cause gastrointestinal irritation if swallowed.

Potential Health Effects: Inhalation

None anticipated under normal product use conditions.

HMIS Ratings: Health: 0 Fire: 0 HMIS Reactivity 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

*** Section 3 - Composition / Information on Ingredients ***

Kit is composed of the following five solutions:

Solution 1

| CAS # | Component | Percent |
|------------|---------------------------------|---------|
| 7732-18-5 | Water | 99 |
| 10035-04-8 | Calcium chloride | <1 |
| 7791-18-6 | Magnesium chloride, hexahydrate | <0.5 |

Solution 2

| CAS # | Component | Percent |
|--------------|--|---------|
| 7732-18-5 | Water | 59 |
| 56-81-5 | Glycerin | 40 |
| Trade Secret | Nuclease | <2 |
| 6381-92-6 | Ethylenediaminetetraacetic acid, disodium, dihydrate | <0.05 |

Solution 3

| CAS # | Component | Percent |
|-----------|--|---------|
| 7732-18-5 | Water | 75 |
| 6381-92-6 | Ethylenediaminetetraacetic acid, disodium, dihydrate | <20 |
| 3483-12-3 | 2,3-Butanediol, 1,4-dimercapto-, (R*,R*)- | <10 |

Lysis Buffer

| CAS # | Component | Percent |
|--------------|--|---------|
| 7732-18-5 | Water | 98 |
| Trade Secret | Detergent | <2 |
| 77-86-1 | Tris (hydroxymethyl) aminomethane | <0.5 |
| 6381-92-6 | Ethylenediaminetetraacetic acid, disodium, dihydrate | <0.5 |

Proteinase K

| CAS # | Component | Percent |
|-----------|-----------|---------|
| 7732-18-5 | Water | 60 |
| 56-81-5 | Glycerin | 40 |

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|------------|---------------------------------------|---------|
| 77-86-1 | Tris (hydroxymethyl) aminomethane | <0.5 |
| 39450-01-6 | Proteinase, tritirachium album serine | <0.05 |
| 10035-04-8 | Calcium chloride | <0.02 |

Advisory

Solution 2 contains an inactive DNA nuclease. The nuclease is activated when added to a sample containing Solution 1 and deactivated by the addition of Solution 3. When used and stored according to the Erase Sperm Isolation Kit directions, the nuclease is not a hazard to other DNA samples in a laboratory.

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Flush immediately with water for at least 15 minutes. Do not rub eyes.

First Aid: Skin

Wash affected area with mild soap and water. If irritation persists, get medical attention.

First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting.

First Aid: Inhalation

None necessary.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

See Section 9 for Flammability Properties.

None

Hazardous Combustion Products

Not Determined

Extinguishing Media

Use appropriate extinguishing media for surrounding fire.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

*** Section 6 - Accidental Release Measures ***

Containment Procedures

Stop the flow of material, if this is without risk.

Clean-Up Procedures

Thoroughly wash the area with water after a spill or leak clean-up.

Evacuation Procedures

None

Special Procedures

None

*** Section 7 - Handling and Storage ***

Handling Procedures

Wash thoroughly after handling.

Storage Procedures

No special storage procedures needed.

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*** Section 8 - Exposure Controls / Personal Protection ***

A: Component Exposure Limits

Glycerin (56-81-5)

ACGIH: 10 mg/m³ TWA (mist)

OSHA: 10 mg/m³ TWA (mist, total particulate); 5 mg/m³ TWA (mist, respirable fraction)

Engineering Controls

None needed.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses; chemical goggles (if splashing is possible).

Personal Protective Equipment: Skin

Use impervious gloves.

Personal Protective Equipment: Respiratory

None needed.

Personal Protective Equipment: General

None

*** Section 9 - Physical & Chemical Properties ***

Appearance: Clear

Physical State: Liquid

Vapor Pressure: ND

Boiling Point: ND

Solubility (H₂O): Soluble

Evaporation Rate: ND

Octanol/H₂O Coeff.: ND

Flash Point Method: NA

Lower Flammability Limit NA

(LFL):

Auto Ignition: NA

Odor: None

pH: approx 7

Vapor Density: ND

Melting Point: NA

Specific Gravity: ND

VOC: ND

Flash Point: NA

Upper Flammability Limit NA

(UFL):

Burning Rate: NA

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Chemical Stability: Conditions to Avoid

None

Incompatibility

None

Hazardous Decomposition

Not Determined

Possibility of Hazardous Reactions

Will not occur.

*** Section 11 - Toxicological Information ***

Acute Dose Effects

A: General Product Information

No information available for the product.

B: Component Analysis - LD50/LC50

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

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Magnesium chloride, hexahydrate (7791-18-6)

Oral LD50 Rat 8100 mg/kg

Glycerin (56-81-5)

Oral LD50 Rat 12600 mg/kg; Dermal LD50 Rat >21900 mg/kg

Detergent (Lysis Buffer) (Trade Secret)

Oral LD50 Rat 1800 mg/kg

Tris (hydroxymethyl) aminomethane (77-86-1)

Oral LD50 Rat 5900 mg/kg

Carcinogenicity

A: General Product Information

No information available for the product.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

No information available for the product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Glycerin (56-81-5)

Test & Species

96 Hr LC50 Oncorhynchus mykiss

51 - 57 mL/L [static]

24 Hr EC50 Daphnia magna

>500 mg/L

Conditions

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

All wastes must be handled in accordance with local, state and federal regulations.

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Not Regulated

*** Section 15 - Regulatory Information ***

US Federal Regulations

Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

| Component | CAS | CA | MA | MN | NJ | PA | RI |
|-----------|---------|----|-----|-----|-----|-----|-----|
| Glycerin | 56-81-5 | No | Yes | Yes | Yes | Yes | Yes |

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Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

| Component | CAS # | Minimum Concentration |
|--------------------------|--------------|-----------------------|
| Detergent (Lysis Buffer) | Trade Secret | 1 % |

Additional Regulatory Information

Component Analysis - Inventory

| Component | CAS # | TSCA | CAN | EEC |
|--|--------------|------|------|--------|
| Water | 7732-18-5 | Yes | DSL | EINECS |
| Calcium chloride | 10035-04-8 | No | No | No |
| Magnesium chloride, hexahydrate | 7791-18-6 | No | No | No |
| Glycerin | 56-81-5 | Yes | DSL | EINECS |
| Nuclease (Solution 2) | Trade Secret | Yes | NDSL | EINECS |
| Ethylenediaminetetraacetic acid, disodium, dihydrate | 6381-92-6 | No | DSL | No |
| 2,3-Butanediol, 1,4-dimercapto-, (R*,R*)- | 3483-12-3 | Yes | DSL | EINECS |
| Detergent (Lysis Buffer) | Trade Secret | Yes | DSL | No |
| Tris (hydroxymethyl) aminomethane | 77-86-1 | Yes | DSL | EINECS |
| Proteinase, tritirachium album serine | 39450-01-6 | No | No | EINECS |

*** Section 16 - Other Information ***

Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.