

Kit components

Product MagneSil® Genomic Large Volume System

96X10ml

Product code A4085

| Substance number | Description | Amount | Symbols |
|-------------------------|----------------------------------|---------------|----------------|
| A409 | eLysis Solution | 1 | Xn |
| A220 | MagneSil® Paramagnetic Particles | 2 | - |
| MD141 | Alcohol Wash, Blood | 1 | - |
| MD142 | Elution Buffer, Blood | 1 | - |

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

1 Identification of substance

Trade name: *eLysis Solution*

Article number: A409

Application of the substance / the preparation *Laboratory chemicals*

Manufacturer/Supplier:

*Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330*

MSDS author: Regulatory.Affairs@promega.com

Emergency information:

CHEMTREC 1-800-424-9300

for call originating outside the United States dial 001-703-527-3887

2 Composition/Data on components

Chemical characterization

Description: *Mixture of the substances listed below with nonhazardous additions.*

Dangerous components:

| | | |
|------------|---------------------------------|--------|
| 593-84-0 | <i>guanidinium thiocyanate</i> | 25-50% |
| 61790-82-7 | <i>Ethoxylated Alkyl Amines</i> | <2.00% |

Additional information: *For the wording of the listed risk phrases refer to section 15.*

3 Hazards identification

Hazard description:



Xn Harmful

Information pertaining to particular dangers for man and environment:

Harmful by inhalation, in contact with skin and if swallowed.

Irritating to eyes and skin.

Classification system:

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

NFPA ratings (scale 0 - 4)

Health = 2

Fire = 0

Reactivity = 0

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Trade name: eLysis Solution

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HMIS-ratings (scale 0 - 4)

Health = 2

Fire = 0

Reactivity = 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200):

Toxic

Irritant

Primary route(s) of entry:

Dermal

Inhalation

Oral

Target Organ(s):

May affect Nervous system (Neurotoxin)

May cause Kidney damage (Nephrotoxin)

Risk of damage to eyes

Affects Gastrointestinal System

Additional information: Product has been observed to have sensitizing effects.

4 First aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Immediately call a doctor.

5 Fire fighting measures

Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Protective equipment: Mouth respiratory protective device.

* 6 Accidental release measures

Person-related safety precautions: Not required.

Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

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Trade name: eLysis Solution

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7 Handling and storage

Handling:

Information for safe handling:

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

No special precautions are necessary if used correctly.

Information about protection against explosions and fires: No special measures required.

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep receptacle tightly sealed.

8 Exposure controls and personal protection

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

General Information

| | |
|---------------|----------------|
| Form: | Solid |
| Color: | Colorless |
| Odor: | Characteristic |

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

Flash point: Not applicable.

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Trade name: eLysis Solution

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| | |
|--|---|
| Auto igniting: | Product is not selfigniting. |
| Danger of explosion: | Product does not present an explosion hazard. |
| Density: | Not determined. |
| Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| pH-value at 20°C (68°F): | 8.8 |
| Solvent content: | |
| Organic solvents: | 0.0 % |
| Water: | 50.3 % |

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Dangerous reactions No dangerous reactions known.
Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

593-84-0 guanidinium thiocyanate

| | | |
|--------|------|--|
| Oral | LD50 | 475 mg/kg (Rat) By analogy to guanidine hydrochloride |
| Dermal | LD50 | >2000 mg/kg (Rabbit) By analogy to Guanidine hydrochloride. |

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: Sensitization possible through inhalation.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

12 Ecological information

General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

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Trade name: eLysis Solution

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13 Disposal considerations

Product:**Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

Contact Promega Safety Department for additional transportation information

DOT regulations: Not regulated

Land transport ADR/RID (cross-border): Not regulated

UN-Number: Not regulated

Maritime transport IMDG:

Marine pollutant: No

15 Regulations

Sara**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65**Chemicals known to cause cancer:**

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenicity categories**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

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Trade name: eLysis Solution

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TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

MAK (German Maximum Workplace Concentration)

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

Product related hazard informations:

The product has been classified and marked in accordance with directives on hazardous materials.

Hazard symbols:

Xn Harmful

Hazard-determining components of labelling:

guanidinium thiocyanate

Risk phrases:

Harmful by inhalation, in contact with skin and if swallowed.

Irritating to eyes and skin.

Safety phrases:

Keep container in a well-ventilated place.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing and gloves.

This material and its container must be disposed of as hazardous waste.

National regulations:

Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS:

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608) 274-4330

* Data compared to the previous version altered.

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 06/15/2009

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1 Identification of substance

Trade name: MagneSil® Paramagnetic Particles

Article number: A220

Application of the substance / the preparation Laboratory chemicals

Manufacturer/Supplier:

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

MSDS author: Regulatory.Affairs@promega.com

Emergency information:

CHEMTREC 1-800-424-9300

for call originating outside the United States dial 001-703-527-3887

2 Composition/Data on components

Chemical characterization

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

| | | |
|-----------|-----------------|-------|
| 1309-37-1 | diiron trioxide | 5-10% |
|-----------|-----------------|-------|

Additional information: For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

Hazard description: Not applicable. Product has been classified as non-hazardous.

Information pertaining to particular dangers for man and environment:

The product does not have to be labelled due to the calculation procedure of international guidelines.

Classification system:

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

NFPA ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200):

Not applicable

Target Organ(s): Not applicable or unknown

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Trade name: MagneSil® Paramagnetic Particles

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4 First aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

5 Fire fighting measures

Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Protective equipment: No special measures required.

6 Accidental release measures

Person-related safety precautions: Not required.

Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Additional information: No dangerous substances are released.

7 Handling and storage

Handling:

Information for safe handling: No special measures required.

Information about protection against explosions and fires: No special measures required.

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: None.

8 Exposure controls and personal protection

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands:

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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Trade name: MagneSil® Paramagnetic Particles

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Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

General Information

| | |
|---------------|----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Characteristic |

Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 100°C (212°F)

Flash point: Not applicable.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Density: Not determined.

Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

pH-value at 20°C (68°F): 4.8

Solvent content:

| | |
|--------------------------|--------|
| Organic solvents: | 0.1 % |
| Water: | 84.9 % |
| VOC content: | 0.1 % |

Solids content: 10.3 %

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Dangerous reactions No dangerous reactions known.

Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin: No irritant effect.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations:

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Trade name: MagneSil® Paramagnetic Particles

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When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information

General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

Product:

Recommendation:

Smaller quantities can be disposed of with household waste.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

Contact Promega Safety Department for additional transportation information

DOT regulations: Not regulated

Hazard class: -

Land transport ADR/RID (cross-border): Not regulated

ADR/RID class: -

UN-Number: Not regulated

Maritime transport IMDG:

IMDG Class: -

Marine pollutant: No

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: -

15 Regulations

Sara

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

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Trade name: MagneSil® Paramagnetic Particles

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Proposition 65**Chemicals known to cause cancer:**

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Carcinogenicity categories**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

IARC (International Agency for Research on Cancer)

1309-37-1 | diiron trioxide

3

NTP (National Toxicology Program)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

1309-37-1 | diiron trioxide

A4

MAK (German Maximum Workplace Concentration)

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

Product related hazard informations:

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

National regulations:

| Class | Share in % |
|-------|------------|
| Water | 84.9 |
| II | 0.1 |

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS:

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

* Data compared to the previous version altered.

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Printing date 06/15/2009

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* **1 Identification of substance**

Trade name: Alcohol Wash, Blood

Article number: MD141

Application of the substance / the preparation Laboratory chemicals

Manufacturer/Supplier:

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

MSDS author: Regulatory.Affairs@promega.com

Emergency information:

CHEMTREC 1-800-424-9300

for call originating outside the United States dial 001-703-527-3887

2 Composition/Data on components

Chemical characterization

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components: Void

Additional information: For the wording of the listed risk phrases refer to section 15.

* **3 Hazards identification**

Hazard description: Not applicable. Product has been classified as non-hazardous.

Information pertaining to particular dangers for man and environment:

The product does not have to be labelled due to the calculation procedure of international guidelines.

Classification system:

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

NFPA ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 0

Fire = 0

Reactivity = 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200):

Not applicable

Target Organ(s): Not applicable or unknown

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Trade name: Alcohol Wash, Blood

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4 First aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

5 Fire fighting measures

Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Protective equipment: No special measures required.

6 Accidental release measures

Person-related safety precautions: Not required.

Measures for environmental protection: Dilute with plenty of water.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Additional information: No dangerous substances are released.

7 Handling and storage

Handling:

Information for safe handling: No special measures required.

Information about protection against explosions and fires: No special measures required.

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: None.

8 Exposure controls and personal protection

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands:

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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Trade name: Alcohol Wash, Blood

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Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

General Information

| | |
|---------------|----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Characteristic |

Change in condition

| | |
|-------------------------------------|---------------|
| Melting point/Melting range: | 0°C (32°F) |
| Boiling point/Boiling range: | 100°C (212°F) |

Flash point: Not applicable.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Density at 20°C (68°F): 1 g/cm³

Solubility in / Miscibility with

Water: Fully miscible.

Solvent content:

| | |
|--------------------------|--------|
| Organic solvents: | 0.0 % |
| Water: | 98.8 % |

Solids content: 1.2 %

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Dangerous reactions No dangerous reactions known.

Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin: No irritant effect.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations:

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Trade name: Alcohol Wash, Blood

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When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information

General notes: Generally not hazardous for water

13 Disposal considerations

Product:

Recommendation:

Smaller quantities can be disposed of with household waste.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

Contact Promega Safety Department for additional transportation information

DOT regulations: Not regulated

Hazard class: -

Land transport ADR/RID (cross-border): Not regulated

ADR/RID class: -

UN-Number: Not regulated

Maritime transport IMDG:

IMDG Class: -

Marine pollutant: No

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: -

15 Regulations

Sara

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients are listed.

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Trade name: Alcohol Wash, Blood

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Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

MAK (German Maximum Workplace Concentration)

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

Product related hazard informations:

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

National regulations:

Water hazard class: Generally not hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS:

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

* Data compared to the previous version altered.

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

1 Identification of substance**Trade name:** *Elution Buffer, Blood***Article number:** MD142**Application of the substance / the preparation:** *Laboratory chemicals***Manufacturer/Supplier:***Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330***MSDS author:** *Regulatory.Affairs@promega.com***Emergency information:***CHEMTREC 1-800-424-9300**for call originating outside the United States dial 001-703-527-3887***2 Composition/Data on components****Chemical characterization****Description:** *Mixture of the substances listed below with nonhazardous additions.***Dangerous components:** *Void***Additional information:** *For the wording of the listed risk phrases refer to section 15.***3 Hazards identification****Hazard description:** *Not applicable. Product has been classified as non-hazardous.***Information pertaining to particular dangers for man and environment:***The product does not have to be labelled due to the calculation procedure of international guidelines.***Classification system:***The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.***NFPA ratings (scale 0 - 4)***Health = 0**Fire = 0**Reactivity = 0***HMIS-ratings (scale 0 - 4)***Health = 0**Fire = 0**Reactivity = 0***OSHA Hazard Overview (Criteria according to 29CFR1910.1200):***Not applicable***Target Organ(s):** *Not applicable or unknown*

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

Trade name: *Elution Buffer, Blood*

(Contd. of page 1)

4 First aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

5 Fire fighting measures

Suitable extinguishing agents:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Protective equipment: No special measures required.

6 Accidental release measures

Person-related safety precautions: Not required.

Measures for environmental protection: Dilute with plenty of water.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Additional information: No dangerous substances are released.

7 Handling and storage

Handling:

Information for safe handling: No special measures required.

Information about protection against explosions and fires: No special measures required.

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: None.

8 Exposure controls and personal protection

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands:

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

General Information

| | |
|---------------|----------------|
| Form: | Fluid |
| Color: | Colorless |
| Odor: | Characteristic |

Change in condition

Melting point/Melting range: 0°C (32°F)

Boiling point/Boiling range: Undetermined.

Flash point: Not applicable.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Density at 20°C (68°F): 1 g/cm³

Solubility in / Miscibility with

Water: Fully miscible.

pH-value at 20°C (68°F): 8.5

Solvent content:

Organic solvents: 0.0 %

Water: 99.9 %

Solids content: 0.2 %

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Dangerous reactions No dangerous reactions known.

Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin: No irritant effect.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations:

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When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information

General notes: Generally not hazardous for water

13 Disposal considerations

Product:

Recommendation:

Smaller quantities can be disposed of with household waste.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

Contact Promega Safety Department for additional transportation information

DOT regulations: Not regulated

Hazard class: -

Land transport ADR/RID (cross-border): Not regulated

ADR/RID class: -

UN-Number: Not regulated

Maritime transport IMDG:

IMDG Class: -

Marine pollutant: No

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: -

15 Regulations

Sara

Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients are listed.

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Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

MAK (German Maximum Workplace Concentration)

None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

Product related hazard informations:

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

National regulations:

Water hazard class: Generally not hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS:

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

* Data compared to the previous version altered.