

## Kit components

Product PureYield™ Plasmid Miniprep System, 100 preps

Product code A1223

Substance number	Description	Amount	Symbols
A160	Elution Buffer (EBB)	1	-
A167	PureYield™ Collection Tubes - Article, MSDS not available.	1	-
A166	PureYield™ Minicolumns - Article, MSDS not available.	1	-
A158	Endotoxin Removal Wash (ERB)	1	Xn F
A157	Neutralization Solution (NSC)	1	Xn
A145	Cell Lysis Buffer (CLC)	1	C
A159	Column Wash Solution (CWC)	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:** Elution Buffer (EBB)

**Article number:** A160

**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 (EBB)**

(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:**

CO<sub>2</sub>, 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

(Contd. on page 3)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Elution Buffer (EBB)**

(Contd. of page 2)

### 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

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	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/cm<sup>3</sup>

### 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:

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Elution Buffer (EBB)**

(Contd. of page 3)

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.

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Elution Buffer (EBB)**

(Contd. of page 4)

**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

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**1 Identification of substance**

**Trade name:** Endotoxin Removal Wash (ERB)

**Article number:** A158

**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:**

50-01-1	guanidinium chloride	25-50%
67-63-0	propan-2-ol	25-50%

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

**3 Hazards identification**

**Hazard description:**



Xn Harmful  
F Highly flammable

**Information pertaining to particular dangers for man and environment:**

Has a narcotizing effect.

Highly flammable.

Harmful if swallowed.

Irritating to eyes and skin.

Vapours may cause drowsiness and dizziness.

**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.

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Endotoxin Removal Wash (ERB)**

(Contd. of page 1)

**NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 3

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 2

Fire = 3

Reactivity = 0

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

Toxic

Irritant

Flammable

**Primary route(s) of entry:**

Dermal

Inhalation

Oral

**Target Organ(s):**

May affect Nervous system (Neurotoxin)

May cause Kidney damage (Nephrotoxin)

May affect Bones

**Additional information:** Keep away from sources of ignition.

## 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:** 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:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

## 6 Accidental release measures

**Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.

**Measures for environmental protection:**

Prevent seepage into sewage system, workpits and cellars.

Dilute with plenty of water.

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.

USA

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

Trade name: Endotoxin Removal Wash (ERB)

(Contd. of page 2)

## 7 Handling and storage

### Handling:

#### Information for safe handling:

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

No special precautions are necessary if used correctly.

#### Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

### Storage:

**Requirements to be met by storerooms and receptacles:** Store in a cool location.

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

#### Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

## 8 Exposure controls and personal protection

### Components with limit values that require monitoring at the workplace:

#### 67-63-0 propan-2-ol

PEL	980 mg/m <sup>3</sup> , 400 ppm
REL	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
TLV	Short-term value: 984 mg/m <sup>3</sup> , 400 ppm Long-term value: 492 mg/m <sup>3</sup> , 200 ppm
BEI	

**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

USA

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

Trade name: Endotoxin Removal Wash (ERB)

(Contd. of page 3)

## 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:** 82°C (180°F)

**Flash point:** ≤ 21°C (≤ 70°F)

**Ignition temperature:** 425°C (797°F)

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.  
 Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

### Explosion limits:

**Lower:** 2.0 Vol %  
**Upper:** 12.0 Vol %

**Vapor pressure at 20°C (68°F):** 43 hPa (32 mm Hg)

**Density at 20°C (68°F):** 1.05055 g/cm<sup>3</sup>

### Solubility in / Miscibility with

**Water:** Fully miscible.

**pH-value at 20°C (68°F):** 5.2

### Solvent content:

**Organic solvents:** 35.0 %  
**Water:** 28.0 %  
**VOC content:** 35.0 %

**Solids content:** 37.0 %

## 10 Stability and reactivity

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

**Dangerous reactions** Reacts with strong acids and oxidizing agents.

**Dangerous products of decomposition:** No dangerous decomposition products known.

## 11 Toxicological information

### Acute toxicity:

**LD/LC50 values that are relevant for classification:**

#### 50-01-1 guanidinium chloride

Oral	LD50	475 mg/kg (Rat)
Irritation of eyes	acute	500 mg (Rabbit) Severe Irritation

(Contd. on page 5)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Endotoxin Removal Wash (ERB)**

(Contd. of page 4)

**Primary irritant effect:***on the skin: Irritant to skin and mucous membranes.**on the eye: Irritating effect.**Sensitization: No sensitizing effects known.***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 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:***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:****Hazard class:**

3

**Identification number:**

UN1219

**Packing group:**

II

**Proper shipping name (technical name):** ISOPROPANOL (ISOPROPYL ALCOHOL), solution**Label**

3

**Land transport ADR/RID (cross-border):****ADR/RID class:**

3 (F1) Flammable liquids

**Danger code (Kemler):**

33

**UN-Number:**

1219

**Packaging group:**

II

**Label:**

3

(Contd. on page 6)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

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Trade name: Endotoxin Removal Wash (ERB)

(Contd. of page 5)

**Description of goods:** 1219 ISOPROPANOL (ISOPROPYL ALCOHOL), solution

**Maritime transport IMDG:**

**IMDG Class:** 3  
**UN Number:** 1219  
**Label:** 3  
**Packaging group:** II  
**EMS Number:** F-E,S-E  
**Marine pollutant:** No  
**Proper shipping name:** ISOPROPANOL (ISOPROPYL ALCOHOL), solution

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 3  
**UN/ID Number:** 1219  
**Label:** 3  
**Packaging group:** II  
**Proper shipping name:** ISOPROPANOL (ISOPROPYL ALCOHOL), solution

## 15 Regulations

Sara

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

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

67-63-0 | propan-2-ol

**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.

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

None of the ingredients are listed.

(Contd. on page 7)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Endotoxin Removal Wash (ERB)**

(Contd. of page 6)

**IARC (International Agency for Research on Cancer)**

67-63-0 | propan-2-ol

3

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

67-63-0 | propan-2-ol

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:**

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

**Hazard symbols:**

Xn Harmful

F Highly flammable

**Hazard-determining components of labelling:**

guanidinium chloride

**Risk phrases:**

Highly flammable.

Harmful if swallowed.

Irritating to eyes and skin.

Vapours may cause drowsiness and dizziness.

**Safety phrases:**

Keep container tightly closed and in a well-ventilated place.

Keep away from sources of ignition - No smoking.

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

Avoid contact with eyes.

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

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

**National regulations:**

Class	Share in %
Water	28.0
NK	35.0

**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:**

(Contd. on page 8)

USA

**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 06/15/2009

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**Trade name: Endotoxin Removal Wash (ERB)**

(Contd. of page 7)

*Promega Corporation  
Environmental Health and Safety Department  
2800 Woods Hollow Road  
Madison, WI  
Ph: (608)274-4330*

**\* Data compared to the previous version altered.**

USA

**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:** Neutralization Solution (NSC)

**Article number:** A157

**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:**

50-01-1	guanidinium chloride	20-25%
	Trade Secret 001-4036	1.0-5.0%
	Trade Secret 002-4036	1.0-5.0%

**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 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

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

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**Trade name:** Neutralization Solution (NSC)

(Contd. of page 1)

**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

Oral

**Target Organ(s):** May affect Nervous system (Neurotoxin)

## \* 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:** 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:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

## \* 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.

## \* 7 Handling and storage

**Handling:****Information for safe handling:**

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

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.

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name:** Neutralization Solution (NSC)

(Contd. of page 2)

**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**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic

**Change in condition**

**Melting point/Melting range:** Undetermined.

**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:** Not determined.

**Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

**pH-value at 20°C (68°F):** 3.8

**Solvent content:**

**Organic solvents:** 0.0 %

(Contd. on page 4)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

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**Trade name:** Neutralization Solution (NSC)

(Contd. of page 3)

**Water:** 65.9 %

## 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:**

**50-01-1 guanidinium chloride**

Oral	LD50	475 mg/kg (Rat)
Irritation of eyes	acute	500 mg (Rabbit) Severe Irritation

**Primary irritant effect:**

**on the skin:** Irritant to skin and mucous membranes.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**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 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:**

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

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name:** Neutralization Solution (NSC)

(Contd. of page 4)

**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):**

7732-18-5 water, distilled, conductivity or of similar purity

50-01-1 guanidinium chloride

7447-40-7 potassium chloride

34487-61-1 sodium hydrogen 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bisphenolate S,S-dioxide

### 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.

### Carcinogenity 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:**

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

(Contd. on page 6)

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Neutralization Solution (NSC)**

(Contd. of page 5)

**Hazard symbols:***Xn Harmful***Risk phrases:***Harmful if swallowed.**Irritating to eyes and skin.***Safety phrases:***Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).**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 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.**

**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:** Cell Lysis Buffer (CLC)

**Article number:** A145

**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](mailto: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:**

151-21-3	sodium dodecyl sulphate	5-10%
1310-73-2	sodium hydroxide	<2.50%

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

**3 Hazards identification**

**Hazard description:**



C Corrosive

**Information pertaining to particular dangers for man and environment:**

Causes burns.

**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 = 3

Fire = 0

Reactivity = 0

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Cell Lysis Buffer (CLC)**

(Contd. of page 1)

**HMIS-ratings (scale 0 - 4)**

Health = 3

Fire = 0

Reactivity = 0

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

Highly Toxic

Corrosive

**Primary route(s) of entry:**

Dermal

Inhalation

Oral

**Target Organ(s):** Not applicable or unknown

## 4 First aid measures

**General information:** Immediately remove any clothing soiled by the product.**After inhalation:** 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.**After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

## 5 Fire fighting measures

**Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

## 6 Accidental release measures

**Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.**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).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

## 7 Handling and storage

**Handling:****Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**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.

USA

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

Trade name: Cell Lysis Buffer (CLC)

(Contd. of page 2)

## 8 Exposure controls and personal protection

**Components with limit values that require monitoring at the workplace:**

**1310-73-2 sodium hydroxide**

PEL	2 mg/m <sup>3</sup>
REL	Short-term value: C 2 mg/m <sup>3</sup>
TLV	Short-term value: C 2 mg/m <sup>3</sup>

**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.

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

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic

**Change in condition**

**Melting point/Melting range:** Undetermined.

**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:** Not determined.

**Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

**pH-value at 20°C (68°F):** 13

**Solvent content:**

**Organic solvents:** 0.0 %

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Cell Lysis Buffer (CLC)**

(Contd. of page 3)

**Water:** 90.9 %

## 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:**

**1310-73-2 sodium hydroxide**

Oral	LD50	2000 mg/kg (Rat)
Irritation of skin	acute	500 mg/ 24H (Rabbit) severe

**Primary irritant effect:**

**on the skin:** Caustic effect on skin and mucous membranes.

**on the eye:**

Strong caustic effect.

Irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

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

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

## \* 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.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

## 13 Disposal considerations

**Product:**

**Recommendation:**

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

(Contd. on page 5)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Cell Lysis Buffer (CLC)**

(Contd. of page 4)

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

## \* 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:**

<b>Hazard class:</b>	8
<b>Identification number:</b>	UN1824
<b>Packing group:</b>	II
<b>Proper shipping name (technical name):</b>	SODIUM HYDROXIDE SOLUTION

**Land transport ADR/RID (cross-border):**

<b>ADR/RID class:</b>	8 Corrosive substances
<b>UN-Number:</b>	1824
<b>Packaging group:</b>	II
<b>Description of goods:</b>	1824 SODIUM HYDROXIDE SOLUTION

**Maritime transport IMDG:**

<b>IMDG Class:</b>	8
<b>UN Number:</b>	1824
<b>Packaging group:</b>	II
<b>Marine pollutant:</b>	No
<b>Propper shipping name:</b>	SODIUM HYDROXIDE SOLUTION

**Air transport ICAO-TI and IATA-DGR:**

<b>ICAO/IATA Class:</b>	8
<b>UN/ID Number:</b>	1824
<b>Packaging group:</b>	II
<b>Propper shipping name:</b>	SODIUM HYDROXIDE SOLUTION

## \* 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.

(Contd. on page 6)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Cell Lysis Buffer (CLC)**

(Contd. of page 5)

**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.

**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:**

C Corrosive

**Hazard-determining components of labelling:**

sodium hydroxide

**Risk phrases:**

Causes burns.

**Safety phrases:**

When using do not eat or drink.

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

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

Wear suitable protective clothing, gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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

Reviewed on 06/15/2009

**1 Identification of substance**

**Trade name:** Column Wash Solution (CWC)

**Article number:** A159

**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:**

1185-53-1	Tris(hydroxymethyl)aminomethane hydrochloride	<2.00%
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**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: Column Wash Solution (CWC)**

(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:**  
 CO<sub>2</sub>, 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:** No special measures required.  
**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

(Contd. on page 3)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Column Wash Solution (CWC)**

(Contd. of page 2)

## 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

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic

### Change in condition

<b>Melting point/Melting range:</b>	0°C (32°F)
<b>Boiling point/Boiling range:</b>	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/cm<sup>3</sup>

### Solubility in / Miscibility with

**Water:** Not miscible or difficult to mix.

**pH-value at 20°C (68°F):** 8.2

### Solvent content:

<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	98.5 %

## 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:

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Column Wash Solution (CWC)**

(Contd. of page 3)

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.

## 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.

(Contd. on page 5)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 06/15/2009

Reviewed on 06/15/2009

**Trade name: Column Wash Solution (CWC)**

(Contd. of page 4)

**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.

**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.

USA