11/30/2020	Kit Components
Product code	Description
FF3760	Wizard® Magnetic 96 DNA Plant System
Components:	
A381	Wash Buffer, Plant
FF377	MagneSil® Paramagnetic Particles
A919A	Lysis Buffer B, Plant
Z919A	Lysis Buffer A, Plant



Printing date 11/30/2020

Reviewed on 07/30/2020

11	deni	tifica	ition	

Product identifier Trade name: <u>Wash Buffer, Plant</u>

Article number: A381 *Application of the substance / the mixture* For Laboratory Use

Details of the supplier of the safety data sheet Manufacturer/Supplier:

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

Information department:

SDS author: ChemicalRegulatory@promega.com Promega Corporation 2800 Woods Hollow Road Madison, WI 53711 U.S.A. 1-800-356-9526 or (608)-274-4330 **Emergency telephone number:** For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture The product is not classified as hazardous according to the Globally Harmonized System (GHS). Label elements GHS label elements Not applicable Hazard pictograms Not applicable Signal word Not applicable Hazard statements Not applicable Classification system: NFPA ratings (scale 0 - 4) Health = 0Fire = 0*Reactivity* = 0HMIS-ratings (scale 0 - 4) *Health* = 0Fire = 0*Reactivity* = 0OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable Target Organ(s): Not applicable or unknown

(Contd. on page 2)

US

Printing date 11/30/2020

Reviewed on 07/30/2020

Trade name: Wash Buffer, Plant

(Contd. of page 1)

Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

The product is made up of a mixture of non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components: Not applicable **Additional information:** For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

Description of first aid measures

General information: No special measures required. After inhalation: If the patient feels unwell or is concerned, obtain medical advice. 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 the patient feels unwell or is concerned, obtain medical advice. Information for doctor: Most important symptoms and effects, both acute and delayed None No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture

None known

No further relevant information available. Advice for firefighters No special advice Protective equipment: No special measures required.

6 Accidental release measures

 Personal precautions, protective equipment and emergency procedures Not required.

 Environmental precautions:

 Dilute with plenty of water.

 Do not allow to enter sewers/ surface or ground water.

 Methods and material for containment and cleaning up:

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

 Reference to other sections

 No dangerous substances are released.

(Contd. on page 3)

[•] US

(Contd. of page 2)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/30/2020

Reviewed on 07/30/2020

Trade name: Wash Buffer, Plant

See Section 7 for information on safe handling. See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling No special measures required. **Information about protection against explosions and fires:** The product is not flammable.

Conditions for safe storage, including any incompatibilities 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. Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Control parameters

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.

Exposure controls

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: Not required.

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:** Not required.

Information on basic physical and General Information	chemical properties	
Appearance: Form:	Fluid	
Color:	Colorless	
Odor:	Not determined	
Odor threshold:	Not determined.	
pH-value at 20 °C (68 °F):	8.4	
Change in condition		
Melting point/Melting range:	0 °C (32 °F)	
Boiling point/Boiling range:	100 °C (212 °F)	
Flash point:	Not applicable.	

US

Safety Data Sheet acc. to OSHA HCS

Printing date 11/30/2020

Reviewed on 07/30/2020

Trade name: Wash Buffer, Plant

	(Contd. of page
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density at 20 °C (68 °F):	1 g/cm ³ (8.345 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/water)	: Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Water:	97.0 %
VOC content:	0.00 %
Solids content:	3.1%
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available. Chemical stability Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications. Possibility of hazardous reactions No dangerous reactions known. Conditions to avoid No further relevant information available. Incompatible materials: No further relevant information available. Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects Acute toxicity: LD/LC50 values that are relevant for classification: No data available Primary irritant effect: on the skin: No irritant effect. on the eye: No 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 5)

Printing date 11/30/2020

Reviewed on 07/30/2020

Trade name: Wash Buffer, Plant

(Contd. of page 4)

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program) None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological information

Toxicity

Aquatic toxicity: *Not available* No further relevant information available. Persistence and degradability Not available No further relevant information available. **Bioaccumulative potential** Not known No further relevant information available. Mobility in soil No further relevant information available. Ecotoxicological effects: **Remark:** Not available Additional ecological information: General notes: Not known to be hazardous to water. Results of PBT and vPvB assessment **PBT:** Not applicable. vPvB: Not applicable. Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations. **Recommended cleansing agent:** Water, if necessary with cleansing agents.

4 Transport information		
UN-Number	Not hazardous for transportation	
DOT, ADR, ADN, IMDG, IATA	Not applicable	
UN proper shipping name	None	
DOT, ADR, ADN, IMDG, IATA	Not applicable	

Printing date 11/30/2020

Reviewed on 07/30/2020

Trade name: Wash Buffer, Plant

		(Contd. of page
Transport hazard class(es)	None	
DOT, ADR, ADN, IMDG, IATA		
Class	Not applicable	
Packing group	None	
DOT, ADR, IMDG, IATA	Not applicable	
Environmental hazards:		
Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex	II of	
MARPOL73/78 and the IBC Code	Not applicable.	
UN "Model Regulation":	Not applicable	

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture 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) Inventory:

All ingredients are listed.

Hazardous Air Pollutants

None of the 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.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

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

None of the ingredients are listed.

GHS label elements Not applicable Signal word Not applicable

(Contd. on page 7)

US

Printing date 11/30/2020

Reviewed on 07/30/2020

Trade name: Wash Buffer, Plant

Hazard statements Not applicable

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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 SDS:

Promega Corporation Chemical Regulatory Department 2800 Woods Hollow Road Madison, WI Ph:(608)274-4330 Date of preparation / last revision 11/30/2020 / 1.0 Abbreviations and acronvms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: Internation Civil Aviation Organization ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit * Data compared to the previous version altered.

(Contd. of page 6)



Printing date 11/30/2020

Reviewed on 11/30/2020

1 Identification

Product identifier Trade name: <u>MagneSil® Paramagnetic Particles</u>

Article number: FF377 Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet Manufacturer/Supplier:

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

Information department:

SDS author: ChemicalRegulatory@promega.com Promega Corporation 2800 Woods Hollow Road Madison, WI 53711 U.S.A. 1-800-356-9526 or (608)-274-4330 **Emergency telephone number:** For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture The product is not classified as hazardous according to the Globally Harmonized System (GHS). Label elements

GHS label elements Not applicable Hazard pictograms Not applicable Signal word Not applicable Hazard statements Not applicable Classification system: NFPA ratings (scale 0 - 4) Health = 0Fire = 0*Reactivity* = 0HMIS-ratings (scale 0 - 4) *Health* = 0Fire = 0*Reactivity* = 0**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Irritant Sensitizer

(Contd. on page 2)

Printing date 11/30/2020

Reviewed on 11/30/2020

Trade name: MagneSil® Paramagnetic Particles

(Contd. of page 1)

1-5%

Primary route(s) of entry: Dermal Target Organ(s): Not applicable or unknown Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

The product is made up of a mixture of non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components:

1309-37-1 iron trioxide

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

4 First-aid measures

Description of first aid measures

General information: No special measures required.

After inhalation: If the patient feels unwell or is concerned, obtain medical advice.

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: If the patient feels unwell or is concerned, obtain medical advice. *Information for doctor:*

Most important symptoms and effects, both acute and delayed Allergic reactions Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture None known No further relevant information available. Advice for firefighters No special advice Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.
Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

(Contd. on page 3)

Printing date 11/30/2020

Reviewed on 11/30/2020

Trade name: MagneSil® Paramagnetic Particles

(Contd. of page 2)

Reference to other sections

No dangerous substances are released. See Section 7 for information on safe handling. See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling No special measures required. Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols. **Information about protection against explosions and fires:** The product is not flammable.

Conditions for safe storage, including any incompatibilities 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. Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Control parameters

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.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing.

Do not eat or drink while working.

Clean skin thoroughly immediately after handling the product.

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: Not required.

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:** Safety glasses

9 Physical and chemical properties

Information on basic physical and chemical properties General Information Appearance: Form: Fluid

(Contd. on page 4)

[–] US

Printing date 11/30/2020

Reviewed on 11/30/2020

Trade name: MagneSil® Paramagnetic Particles

		(Contd. of page
Color:	Colorless	
Odor:	Not determined	
Odor threshold:	Not determined.	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	100 °C (212 °F)	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not applicable.	
Ignition temperature:	>370 °C (>698 °F)	
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure:	Not determined.	
Density:	Not determined.	
Relative density	Not determined.	
Vapor density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Fully miscible.	
Partition coefficient (n-octanol/wa	ter): Not determined.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Water:	89.2 %	
VOC content:	0.00 %	
Solids content:	10.3 %	
Other information	No further relevant information available.	

10 Stability and reactivity

Reactivity No further relevant information available. Chemical stability Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications. Possibility of hazardous reactions No dangerous reactions known. Conditions to avoid No further relevant information available. Incompatible materials: No further relevant information available. Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects Acute toxicity: LD/LC50 values that are relevant for classification: No data available Primary irritant effect: on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 11/30/2020

Reviewed on 11/30/2020

Trade name: MagneSil® Paramagnetic Particles

(Contd. of page 4)

3

3

on the eye: No irritating effect. Sensitization: No sensitizing effects known. Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: The product is not subject to classification according to internally approved calculation methods for preparations: Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)

7631-86-9 silicon dioxide

1309-37-1 iron trioxide

NTP (National Toxicology Program)

None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological information

Toxicity

Aquatic toxicity: *Not available* No further relevant information available. Persistence and degradability *Not available* No further relevant information available. **Bioaccumulative potential** Not known No further relevant information available. Mobility in soil No further relevant information available. Ecotoxicological effects: **Remark:** Not available Additional ecological information: General notes: Not known to be hazardous to water. **Results of PBT and vPvB assessment PBT:** Not applicable. vPvB: Not applicable. Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

(Contd. on page 6)

US

Printing date 11/30/2020

Reviewed on 11/30/2020

(Contd. of page 5)

Trade name: MagneSil® Paramagnetic Particles

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

UN-Number	Not hazardous for transportation	
DOT, ADR, ADN, IMDG, IATA	Not applicable	
UN proper shipping name	None	
DOT, ADR, ADN, IMDG, IATA	Not applicable	
Transport hazard class(es)	None	
DOT, ADR, ADN, IMDG, IATA		
Class	Not applicable	
Packing group	None	
DOT, ADR, IMDG, IATA	Not applicable	
Environmental hazards:		
Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex	II of	
MARPOL73/78 and the IBC Code	Not applicable.	
UN "Model Regulation":	Not applicable	

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture 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) Inventory:

1309-37-1 iron trioxide

Hazardous Air Pollutants

None of the 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.

(Contd. on page 7)

- US

Printing date 11/30/2020

Reviewed on 11/30/2020

Trade name: MagneSil® Paramagnetic Particles

(Contd. of page 6)

Cancerogenity categories

EPA (Environmental Protection Agency)

None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)

1309-37-1 iron trioxide

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

None of the ingredients are listed.

GHS label elements Not applicable Signal word Not applicable Hazard statements Not applicable

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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 SDS:

Promega Corporation Chemical Regulatory Department 2800 Woods Hollow Road Madison, WI Ph:(608)274-4330 Date of preparation / last revision 11/30/2020 / 1.0 Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: Internation Civil Aviation Organization ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit * Data compared to the previous version altered.

A4



Printing date 11/30/2020

Reviewed on 08/21/2020

1 Identification	
Product identifier	

Trade name: <u>Lysis Buffer B, Plant</u>

Article number: A919A Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet Manufacturer/Supplier:

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

Information department:

SDS author: ChemicalRegulatory@promega.com Promega Corporation 2800 Woods Hollow Road Madison, WI 53711 U.S.A. 1-800-356-9526 or (608)-274-4330 **Emergency telephone number:** For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture The product is not classified as hazardous according to the Globally Harmonized System (GHS). Label elements GHS label elements Not applicable Hazard pictograms Not applicable Signal word Not applicable Hazard statements Not applicable Classification system: NFPA ratings (scale 0 - 4) Health = 0Fire = 0*Reactivity* = 0HMIS-ratings (scale 0 - 4) *Health* = 0Fire = 0*Reactivity* = 0OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable Target Organ(s): Not applicable or unknown

Page 1/7

(Contd. on page 2)

⁻ US

Printing date 11/30/2020

Reviewed on 08/21/2020

Trade name: Lysis Buffer B, Plant

(Contd. of page 1)

1-5%

Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

The product is made up of a mixture of non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components:

1185-53-1 Tris HCl

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

4 First-aid measures

Description of first aid measures

General information: No special measures required.

After inhalation: If the patient feels unwell or is concerned, obtain medical advice.

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 the patient feels unwell or is concerned, obtain medical advice.

Information for doctor:

Most important symptoms and effects, both acute and delayed None

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture None known No further relevant information available. Advice for firefighters No special advice Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required. **Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

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

(Contd. on page 3)

US

Printing date 11/30/2020

Reviewed on 08/21/2020

Trade name: Lysis Buffer B, Plant

Reference to other sections

No dangerous substances are released. See Section 7 for information on safe handling. See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling No special measures required. **Information about protection against explosions and fires:** The product is not flammable.

Conditions for safe storage, including any incompatibilities 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. Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Control parameters

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.

Exposure controls

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: Not required.

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:** Not required.

Information on basic physical and	chemical properties	
General Information		
Appearance:		
Form:	Fluid	
Color:	Colorless	
Odor:	Not determined	
Odor threshold:	Not determined.	
pH-value at 20 °C (68 °F):	7.3	
Change in condition		
Melting point/Melting range:	0 °C (32 °F)	

(Contd. of page 2)

Printing date 11/30/2020

Reviewed on 08/21/2020

Trade name: Lysis Buffer B, Plant

		(Contd. of page
Boiling point/Boiling range:	Undetermined.	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not applicable.	
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:	· ·	
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure:	Not determined.	
Density at 20 °C (68 °F):	1 g/cm ³ (8.345 lbs/gal)	
Relative density	Not determined.	
Vapor density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Fully miscible.	
Partition coefficient (n-octanol/wat	er): Not determined.	
Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Water:	97.7 %	
VOC content:	0.00 %	
Other information	No further relevant information available.	

10 Stability and reactivity

Reactivity No further relevant information available. Chemical stability Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications. Possibility of hazardous reactions No dangerous reactions known. Conditions to avoid No further relevant information available. Incompatible materials: No further relevant information available. Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects Acute toxicity: LD/LC50 values that are relevant for classification: No data available Primary irritant effect: on the skin: No irritant effect. on the eye: No 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 5)

US –

Printing date 11/30/2020

Reviewed on 08/21/2020

Trade name: Lysis Buffer B, Plant

(Contd. of page 4)

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program) None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological information

Toxicity

Aquatic toxicity: *Not available* No further relevant information available. Persistence and degradability Not available No further relevant information available. **Bioaccumulative potential** Not known No further relevant information available. Mobility in soil No further relevant information available. Ecotoxicological effects: **Remark:** Not available Additional ecological information: General notes: Not known to be hazardous to water. Results of PBT and vPvB assessment **PBT:** Not applicable. vPvB: Not applicable. Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations. **Recommended cleansing agent:** Water, if necessary with cleansing agents.

UN-Number	Not hazardous for transportation	
DOT, ADR, ADN, IMDG, IATA	Not applicable	
UN proper shipping name	None	
DOT, ADR, ADN, IMDG, IATA	<i>Not applicable</i>	

Printing date 11/30/2020

Reviewed on 08/21/2020

Trade name: Lysis Buffer B, Plant

		(Contd. of page
Transport hazard class(es)	None	
DOT, ADR, ADN, IMDG, IATA		
Class	Not applicable	
Packing group	None	
DOT, ADR, IMDG, IATA	Not applicable	
Environmental hazards:		
Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex	II of	
MARPOL73/78 and the IBC Code	Not applicable.	
UN "Model Regulation":	Not applicable	

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture 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) Inventory:

All ingredients are listed.

Hazardous Air Pollutants

None of the 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.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

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

None of the ingredients are listed.

GHS label elements Not applicable Signal word Not applicable

(Contd. on page 7)

US

Printing date 11/30/2020

Reviewed on 08/21/2020

Trade name: Lysis Buffer B, Plant

Hazard statements Not applicable

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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 SDS:

Promega Corporation Chemical Regulatory Department 2800 Woods Hollow Road Madison, WI Ph:(608)274-4330 Date of preparation / last revision 11/30/2020 / 1.0 Abbreviations and acronvms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: Internation Civil Aviation Organization ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit * Data compared to the previous version altered.

(Contd. of page 6)



Printing date 11/30/2020

Reviewed on 09/16/2020

Product identifier Trade name: <u>Lysis Buffer A, Pla</u>	<u>int</u>
Article number: Z919A Application of the substance / th	e mixture For Laboratory Use
Details of the supplier of the safe Manufacturer/Supplier:	ety data sheet
Promega Corporation 2800 Woods Hollow Road Madison, WI 53711 U.S.A. 1-800-356-9526 or (608)-274-43	30
and Canada: 1-800-424-9300	

Classification of the substance or mixture



Skin Corr. 1BH314Causes severe skin burns and eye damage.Eye Dam. 1H318Causes serious eye damage.

GHS07

Acute Tox. 4H302Harmful if swallowed.Acute Tox. 4H332Harmful if inhaled.

Label elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). (Contd. on page 2)

- US -

US

Safety Data Sheet acc. to OSHA HCS

Printing date 11/30/2020

Reviewed on 09/16/2020

Trade name: Lysis Buffer A, Plant

(Contd. of page 1) Hazard pictograms GHS05 GHS07 Signal word Danger Hazard-determining components of labeling: guanidinium thiocyanate Hazard statements Harmful if swallowed or if inhaled. Causes severe skin burns and eye damage. **Precautionary statements** Do not breathe dusts or mists. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: Call a poison center/doctor if you feel unwell. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 2Fire = 0*Reactivity* = 0HMIS-ratings (scale 0 - 4) *Health* = 2Fire = 0Reactivity = 0OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Corrosive Environmental Hazard **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 **Other hazards Results of PBT and vPvB assessment PBT:** Not applicable. (Contd. on page 3)

Printing date 11/30/2020

Reviewed on 09/16/2020

Trade name: Lysis Buffer A, Plant

vPvB: Not applicable.

(Contd. of page 2)

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description:

The product is made up of a mixture of non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components:

593-84-0 guanidinium thiocyanate

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

25-50%

4 First-aid measures

Description of first aid measures General information: Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Seek medical treatment. 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. Seek medical treatment in case of complaints. After skin contact: Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor. After eye contact: Call a doctor immediately. After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor. Seek immediate medical advice. Information for doctor: Most important symptoms and effects, both acute and delayed None No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture None known No further relevant information available. Advice for firefighters In the case of fire, wear respiratory protective equipment and chemical protective suit. (Contd. on page 4)

page 4)

(Contd. of page 3)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/30/2020

Reviewed on 09/16/2020

Trade name: Lysis Buffer A, Plant

Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Mount respiratory protective device. Remove persons from danger area. Wear protective equipment. Keep unprotected persons away. *Keep people at a distance and stay upwind.* Wear protective clothing. **Environmental precautions:** Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system. Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water. Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Dispose contaminated material as waste according to Section 13. Ensure adequate ventilation. Keep away from water. Reference to other sections See Section 7 for information on safe handling. See Section 13 for disposal information.

7 Handling and storage

Handling:

Precautions for safe handling Keep receptacles tightly sealed. Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. Prevent formation of aerosols. **Information about protection against explosions and fires:** The product is not flammable.

Conditions for safe storage, including any incompatibilities Storage:

Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Do not store together with acids. Further information about storage conditions: Keep receptacle tightly sealed. Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Control parameters

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.

(Contd. on page 5)

US –

Printing date 11/30/2020

*

Reviewed on 09/16/2020

Trade name: Lysis Buffer A, Plant

(Contd. of page 4)

US

Exposure controls	
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.	
Do not eat or drink while working.	
Clean skin thoroughly immediately after handling the product.	
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.	
Select the glove material considering penetration time, rate of diffusion and degradation time.	
It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive	2
89/686/EEC and the standard EN 374 derived from it.	
Material of gloves	
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and	l
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	
Use equipment for eye protection tested and approved under government NIOSH standards.	

Information on basic physical and	chemical properties	
General Information		
Appearance:		
Form:	Fluid	
Color:	Colorless	
Odor:	Not determined	
Odor threshold:	Not determined.	
pH-value at 20 °C (68 °F):	7.9	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	100 °C (212 °F)	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not applicable.	
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure:	Not determined.	

Printing date 11/30/2020

Reviewed on 09/16/2020

Trade name: Lysis Buffer A, Plant

		(Contd. of page 5
Density at 20 °C (68 °F):	1.102 g/cm ³ (9.19619 lbs/gal)	
Relative density	Not determined.	
Vapor density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Fully miscible.	
Partition coefficient (n-octanol/	water): Not determined.	
Viscosity:	, ,	
Dynamic:	Not determined.	
Kinematic:	Not determined.	
Water:	52.7 %	
VOC content:	0.00 %	
Solids content:	48.0 %	
Other information	No further relevant information available.	

10 Stability and reactivity

Reactivity No further relevant information available.

Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications. *Possibility of hazardous reactions* No dangerous reactions known.

Conditions to avoid No further relevant information available.

Incompatible materials:

Exposure to strong acid will result in the generation of toxic gases

Exposure to bleach may result in the generation of toxic gas

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:

593-84-0 guanidinium thiocyanate

Oral LD50 475 mg/kg (Rat)

Dermal LD50 By analogy to guanidine hydrochloride By analogy to Guanidine hydrochloride.

Primary irritant effect:

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

on the eye: Strong caustic effect.

Sensitization: Sensitization possible through inhalation.

Additional toxicological information:

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

Corrosive

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

(Contd. on page 7)

US

Printing date 11/30/2020

Reviewed on 09/16/2020

Trade name: Lysis Buffer A, Plant

(Contd. of page 6)

Carcinogenic categories

IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

NTP (National Toxicology Program) None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

12 Ecological information

Toxicity

Aquatic toxicity: Harmful to aquatic life with long lasting effects. Persistence and degradability *Not available* No further relevant information available. **Bioaccumulative potential** Not known No further relevant information available. Mobility in soil No further relevant information available. Ecotoxicological effects: **Remark:** Harmful to fish Additional ecological information: General notes: Must not reach bodies of water or drainage ditch undiluted or unneutralized. Harmful to aquatic organisms Results of PBT and vPvB assessment **PBT:** Not applicable. vPvB: Not applicable. Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations. **Recommended cleansing agent:** Water, if necessary with cleansing agents.

4 Transport information		
UN-Number DOT, ADR, IMDG, IATA	UN1760	
UN proper shipping name DOT	None Corrosive liquid, n.o.s. solution	

Printing date 11/30/2020

Reviewed on 09/16/2020

Trade name: Lysis Buffer A, Plant

IMDG, IATA CORROSIVE LIQUID, N.O.S. solution Transport hazard class(es) None DOT	400	(Contd. of pa
DOT Class 8 Corrosive substances Label 8 ADR Class 8 (C9) Corrosive substances Label 8 Label 8 IADR 8 Class 8 (C9) Corrosive substances Label 8 IMDG, LATA 8 Class 8 Corrosive substances Label 8 Packing group None DOT, ADR, IMDG, LATA 11 Environmental hazards: Marine pollutant: Marine pollutant: No Special precautions for user Warning: Corrosive substances Hazard identification number (Kemler code): 80 80 Stowage Codegory B Stowage Codegory B Stowage Codegory B Stowage Code EQ Not applicable. Transport/Additional information: ADR ADR Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml Maximum net quantity per inner packaging: 30 ml	ADR IMDG, IATA	1760 CORROSIVE LIQUID, N.O.S. solution CORROSIVE LIQUID, N.O.S. solution
Class 8 Corrosive substances Label 8 ADR 8 Class 8 (C9) Corrosive substances Label 8 Label 8 IMDG, LATA 8 Class 8 Corrosive substances Label 8 Marking group None DOT, ADR, IMDG, LATA 11 Environmental hazards: None Marine pollutant: No Special precautions for user Warning: Corrosive substances Hazard identification number (Kemler code): 80 8 EMS Number: F-A,S-B Stowage Code SW2 Clear of living quarters. Transport in bulk according to Annex II of Not applicable. Transport Additional information: Not applicable. Transport/Additional information: Xot applicable. Transport Additional information: Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml Maximum net quantity per inner packaging: 30 ml	Transport hazard class(es)	None
Class 8 Corrosive substances Label 8 ADR 8 Class 8 (C9) Corrosive substances Label 8 Label 8 IMDG, IATA 8 Class 8 Corrosive substances Label 8 Procking group None DOT, ADR, IMDG, IATA 11 Environmental hazards: No Marine pollutant: No Special precautions for user Warning: Corrosive substances Hazard identification number (Kemler code): 80 80 EMS Number: F-4,S-B Storwage Code SW2 Clear of living quarters. Transport in bulk according to Annex II of MARPOL7378 and the IBC Code Not applicable. Transport in bulk according to Annex II of Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml Maximum net quantity per outer packaging: 50 ml Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml	DOT	
Class 8 Corrosive substances Label 8 ADR 8 Class 8 (C9) Corrosive substances Label 8 Label 8 IMDG, IATA 8 Class 8 Corrosive substances Label 8 Procking group None DOT, ADR, IMDG, IATA 11 Environmental hazards: No Marine pollutant: No Special precautions for user Warning: Corrosive substances Hazard identification number (Kemler code): 80 80 EMS Number: F-4,S-B Storwage Code SW2 Clear of living quarters. Transport in bulk according to Annex II of MARPOL7378 and the IBC Code Not applicable. Transport in bulk according to Annex II of Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml Maximum net quantity per outer packaging: 50 ml Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml		
Label 8 ADR ADR Image: Class 8 (C9) Corrosive substances Label 8 Indef. IATA 8 IMDG, IATA 8 Class 8 Corrosive substances Label 8 Packing group None DOT, ADR, IMDG, IATA I Environmental hazards: None Marine pollutant: No Special precautions for user Warning: Corrosive substances Hazard identification number (Kemler code): 80 EMS Number: F-A,S-B Stowage Category B Stowage Category B Stowage Category Not applicable. Transport in bulk according to Annex II of Not applicable. Transport/Additional information: Not applicable. ADR Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 30 ml Maximum net quantity per inner packaging: 30 ml	CORROSIVE	
Label 8 ADR ADR Image: Class 8 (C9) Corrosive substances Label 8 Indef. IATA 8 IMDG, IATA 8 Class 8 Corrosive substances Label 8 Packing group None DOT, ADR, IMDG, IATA I Environmental hazards: None Marine pollutant: No Special precautions for user Warning: Corrosive substances Hazard identification number (Kemler code): 80 EMS Number: F-A,S-B Stowage Category B Stowage Category B Stowage Category Not applicable. Transport in bulk according to Annex II of Not applicable. Transport/Additional information: Not applicable. ADR Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 30 ml Maximum net quantity per inner packaging: 30 ml	8	
ADR Vision 8 Class 8 (C9) Corrosive substances Label 8 INDG, IATA 8 Vision 8 Class 8 Corrosive substances Label 8 Packing group None DOT, ADR, IMDG, IATA II Environmental hazards: No Marine pollutant: No Special precautions for user Warning: Corrosive substances Hazard identification number (Kemler code): 80 80 Stowage Category B Stowage Category B Stowage Code SW2 Clear of living quarters. Transport in bulk according to Annex II of MARPOL7378 and the IBC Code Not applicable. Transport/Additional information: Image: Code: E2 Maximum net quantity per outer packaging: 30 ml Maximum net quantity per outer packaging: 500 ml MDG III Excepted quantities (LQ) Limited quantities (LQ) IL Excepted quantities (EQ) Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml	Class	
Class8 (C9) Corrosive substancesLabel8INDG, LATA8INDG, LATAIImpose8Class8 Corrosive substancesLabel8Packing groupNoneDOT, ADR, IMDG, LATAIIEnvironmental hazards:NoMarine pollutant:NoSpecial precautions for userWarning: Corrosive substancesHazard identification number (Kemler code): 80EMS Number:F-A_S-BStowage CategoryBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL/378 and the IBC CodeNot applicable.Transport/Additional information:Not applicable.Transport/Additional information:Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (LQ)IL Excepted quantities (LQ)Limited quantities (LQ)IL Excepted quantities (EQ)Limited quantities (EQ)IL 		
Label8IMDG, IATAImage: Constant of the state of	ADR	
Label8IMDG, IATAImage: Constant of the state of	J. State	
Label8IMDG, IATAImage: Construct of the state of		
Label8IMDG, IATAImage: Construct of the state of	V	
IMDG, IATA View Class 8 Corrosive substances Label 8 Packing group None DOT, ADR, IMDG, IATA II Environmental hazards: No Marine pollutant: No Special precautions for user Warning: Corrosive substances Hazard identification number (Kemler code): 80 EMS Number: FA,S-B Stowage Category Stowage Code SW2 Clear of living quarters. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. Transport/Additional information: ADR Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml IMDG IIL Excepted quantities (LQ) IL Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml	Class	8 (C9) Corrosive substances
Class8 Corrosive substancesLabel8Packing groupNoneDOT, ADR, IMDG, IATAIIEnvironmental hazards:IIMarine pollutant:NoSpecial precautions for userWarning: Corrosive substancesHazard identification number (Kemler code):80EMS Number:F-A,S-BStowage CategoryBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL 73/78 and the IBC CodeNot applicable.Transport/Additional information:Not applicable.ADR Excepted quantities (EQ)Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (EQ)IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml	Label	8
Label8Packing group DOT, ADR, IMDG, IATANone IIEnvironmental hazards: Marine pollutant:NoSpecial precautions for user Hazard identification number (Kemler code):Warning: Corrosive substances Hazard identification number (Kemler code):EMS Number: EMS Number:F-A, S-B Stowage Category B Stowage CodeTransport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information: ADR Excepted quantities (EQ)Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (LQ) Excepted quantities (EQ)IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml	IMDG, IATA	
Label8Packing group DOT, ADR, IMDG, IATANone IIEnvironmental hazards: Marine pollutant:NoSpecial precautions for user Hazard identification number (Kemler code):Warning: Corrosive substances Hazard identification number (Kemler code):Stowage Category Stowage CodeBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (LQ)IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml	Eg	
Label8Packing group DOT, ADR, IMDG, IATANone IIEnvironmental hazards: Marine pollutant:NoSpecial precautions for user Hazard identification number (Kemler code):Warning: Corrosive substances Hazard identification number (Kemler code):Stowage Category Stowage CodeBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (LQ)IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml		
Label8Packing group DOT, ADR, IMDG, IATANone IIEnvironmental hazards: Marine pollutant:NoSpecial precautions for user Hazard identification number (Kemler code):Warning: Corrosive substances Hazard identification number (Kemler code):Stowage Category Stowage CodeBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (LQ)IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml	*	
Packing groupNonePot, ADR, IMDG, IATAIIEnvironmental hazards: Marine pollutant:NoSpecial precautions for userWarning: Corrosive substancesHazard identification number (Kemler code): 8080EMS Number:F-A,S-BStowage CategoryBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Not applicable.ADR Excepted quantities (EQ)Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (EQ)IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml	Class	
DOT, ADR, IMDG, IATAIIEnvironmental hazards: Marine pollutant:NoSpecial precautions for userWarning: Corrosive substancesHazard identification number (Kemler code): 80FAS-BEMS Number:F-A,S-BStowage CategoryBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (LQ)IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml		•
Environmental hazards: Marine pollutant:NoSpecial precautions for userWarning: Corrosive substancesHazard identification number (Kemler code): 80Warning: Corrosive substancesEMS Number:F-A,S-BStowage CategoryBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Not applicable.ADR Excepted quantities (EQ)Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (EQ)IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 500 ml		
Marine pollutant:NoSpecial precautions for userWarning: Corrosive substancesHazard identification number (Kemler code):80EMS Number:F-A,S-BStowage CategoryBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (LQ)IL Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 500 ml		-
Hazard identification number (Kemler code): 80EMS Number:F-A,S-BStowage CategoryBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Not applicable.ADR Excepted quantities (EQ)Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (EQ)IL Code: E2 Maximum net quantity per inner packaging: 500 ml	Marine pollutant:	No
EMS Number:F-A,S-BStowage CategoryBStowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Not applicable.ADR Excepted quantities (EQ)Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (LQ)1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per inner packaging: 500 ml	Special precautions for user	Warning: Corrosive substances
Stowage Category Stowage CodeB SW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Not applicable.ADR Excepted quantities (EQ)Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (LQ)IL Code: E2 Maximum net quantity per inner packaging: 500 ml		
Stowage CodeSW2 Clear of living quarters.Transport in bulk according to Annex II of MARPOL73/78 and the IBC CodeNot applicable.Transport/Additional information:Not applicable.ADR Excepted quantities (EQ)Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (EQ)IL Code: E2 Maximum net quantity per inner packaging: 500 ml		
MARPOL73/78 and the IBC Code Not applicable. Transport/Additional information: Code: E2 ADR Code: E2 Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml MARPOL73/78 and the IBC Code Not applicable. ADR Code: E2 Maximum net quantity per inner packaging: 30 ml IMDG IL Limited quantities (LQ) IL Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml	Stowage Code	SW2 Clear of living quarters.
Transport/Additional information: ADR Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml MAXimum net quantity per outer packaging: 500 ml IMDG Limited quantities (LQ) 1L Excepted quantities (EQ) Code: E2 Maximum net quantity per outer packaging: 500 ml		
ADR Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml IMDG Limited quantities (LQ) Excepted quantities (EQ) Code: E2 Maximum net quantity per outer packaging: 500 ml IMDG Limited quantities (LQ) Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml		Not applicable.
Excepted quantities (EQ)Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 mlIMDG Limited quantities (LQ)1L Code: E2 Maximum net quantity per inner packaging: 30 ml		
Imaximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml IMDG Limited quantities (LQ) Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml	ADR Excented quantities (EQ)	Code: F2
Maximum net quantity per outer packaging: 500 mlIMDGImited quantities (LQ)ILExcepted quantities (EQ)Code: E2Maximum net quantity per inner packaging: 30 ml	Excepted quantities (EQ)	
Limited quantities (LQ)1LExcepted quantities (EQ)Code: E2Maximum net quantity per inner packaging: 30 ml		
<i>Excepted quantities (EQ)</i> Code: E2 Maximum net quantity per inner packaging: 30 ml	IMDG	
Maximum net quantity per inner packaging: 30 ml		
	Excepted quantities (EQ)	

US

(Contd. of page 8)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/30/2020

Reviewed on 09/16/2020

Trade name: Lysis Buffer A, Plant

UN "Model Regulation":

UN 1760 CORROSIVE LIQUID, N.O.S. SOLUTION, 8, II

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture 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) Inventory:

All ingredients are listed.

Hazardous Air Pollutants

None of the 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.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

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

None of the ingredients are listed.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS). **Signal word** Danger

Hazard-determining components of labeling:
guanidinium thiocyanateHazard statementsHarmful if swallowed or if inhaled.
Causes severe skin burns and eye damage.Precautionary statementsDo not breathe dusts or mists.Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
If swallowed: Rinse mouth. Do NOT induce vomiting.

Printing date 11/30/2020

Reviewed on 09/16/2020

Trade name: Lysis Buffer A, Plant

(Contd. of page 9)

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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 SDS:

Promega Corporation Chemical Regulatory Department 2800 Woods Hollow Road Madison, WI Ph:(608)274-4330 **Date of preparation / last revision** 11/30/2020 / 1.0

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: Internation Civil Aviation Organization ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Acute Tox. 4: Acute toxicity – Category 4 Skin Corr. 1B: Skin corrosion/irritation - Category 1B Eye Dam. 1: Serious eye damage/eye irritation - Category 1 * Data compared to the previous version altered.