

Material Safety Data Sheet

Trade Name CB Buffer

Revision Date: 03/11/2014

Version: 2.0

1. IDENTIFICATION OF PRODUCT AND COMPANY

1.1. Identification and Product Name

Product Name CB Buffer

1.2. Intended Use

Research Use Only

1.3. Manufacturer

Omega Bio-tek, Inc.

400 Pinnacle Way, Suite 450

Norcross, Georgia 30071

USA

Telephone 1-800-832-8896

Email info@omegabiotek.com

1.4. Emergency Telephone

If medical emergency, call 911.

Contact your local Poison Control Center.

2. HAZARD IDENTIFICATION

2.1. Emergency Overview

OSHA Hazards

Target Organ Effect, Toxic by Ingestion, Irritant

Target Organs

Bone Marrow, Nerves

GHS Classification

Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2A)

GHS Symbols



Signal Word

WARNING

Hazard Statement(s)

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled

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Precautionary Statement(s)

P261 P305 + P351 + P338	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311	Call a POISON CENTER or doctor/ physician.

2.2 HMIS Classification (Scale 0-4)

Health Hazard	2
Flammability	0
Physical Hazards	0

2.3 NFPA Rating (Scale 0-4)

Health Hazard	2
Fire	0
Reactivity Hazard	0

2.4 Potential Health Effects

Inhalation	Toxic if Inhaled. May cause respiratory tract irritation.
Skin	Harmful if absorbed through skin. May cause skin irritation.
Eyes	Causes eye irritation.
Ingestion	Harmful if swallowed.
Aggravated Medical Condition	May cause nervous system disturbances.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Mixture of the substances listed below with nonhazardous additions.

3.2 Synonyms

Guanidinium chloride
Guanidine monohydrochloride
Guanidinium hydrochloride

3.3 Component

Component	Classification	Concentration
Guanidine Hydrochloride CH ₆ CIN ₃	Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; H302, H315, H319	25-50%
CAS-No. 50-01-1		
EC-No. 200-002-3		
Index-No. 607-148-00-0		

Refer to Section 16 for full text of H-Statements and R-Phrases.

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4. FIRST AID MEASURES

4.1 General Advice

Exit to a safe area. Consult a physician. Seek medical attention.

4.2 If Inhaled

Move to fresh air. If not breathing, give artificial respiration. Seek medical attention.

4.3 In Case of Skin Contact

Exit to safe area. Wash thoroughly with soap and water. Seek medical attention.

4.4 In Case of Eye Contact

Flush eyes with clean water for a minimum of 15 minutes keeping eyes open. Seek medical attention.

4.5 If Swallowed

Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention.

5. FIREFIGHTING MEASURES

5.1 Conditions of Flammability

Not flammable or combustible.

5.2 Suitable Extinguishing Media

Dry powder, CO₂, water spray, or regular foam.

5.3 Special Protective Equipment for Firefighters

Wear self-contained breathing apparatus, if necessary.

5.4 Hazardous Combustion Products

Carbon oxides (CO, CO₂), Nitrogen oxides (NO_x), Hydrogen Chloride gas

5.5 Further Information

Prevent fire-fighting water from entering surface water or groundwater.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Wear respiratory protection. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. See Section 8: Exposure Controls/Personal Protection for further details.

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6.2 Environmental Precautions

Prevent further leakage if area is safe. Do not let product enter drains. Avoid discharge into the environment.

6.3 Methods and Materials for Containment and Cleaning Up

Use inert absorbent material to soak up spill. Dispose of as hazardous waste. Do not flush with water.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes. Avoid inhalation of vapor or mist.

7.2 Conditions for Safe Storage

Keep containers tightly closed in a dry, cool, and well-ventilated place. Protect from moisture.

7.3 Incompatible Products

Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Personal Protective Equipment

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment. Use respirators that have been approved by NIOSH.

Hand Protection

Use gloves when handling this product. Inspect gloves prior to use for any visible damage. Use proper glove removal technique to prevent contact with skin. Dispose of gloves in accordance with applicable laws. Wash and dry hands after use.

Eye Protection

Use a face shield and/or safety goggles when handling this product. Use eye ware that has been approved by NIOSH.

Skin and Body Protection

Wear appropriate laboratory attire when handling this product such as gloves, long pants, closed-toe shoes, and laboratory coat.

Hygiene Measures

Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after using this product.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form	liquid
Color	colorless

9.2 Safety Data

pH	no data available
Melting Point/Freezing Point	no data available
Boiling Point	no data available
Flash Point	no data available
Ignition Temperature	no data available
Autoignition Temperature	no data available
Lower Explosion Limit	no data available
Upper Explosion Limit	no data available
Vapor Pressure	no data available
Density	no data available
Water Solubility	no data available
Partition Coefficient: n-octanol/water	no data available
Relative Vapor Density	no data available
Odor	no data available
Odor Threshold	no data available
Evaporation Rate	no data available

10. STABILITY AND REACTIVITY

10.1 Chemical Stability

Stable under recommended storage conditions.

10.2 Possibility of Hazardous Reactions

no data available

10.3 Conditions to Avoid

Heating

10.4 Materials to Avoid

Strong oxidizing agents, Strong acids, Organic materials

10.5 Hazardous Decomposition Products

Carbon oxides, nitrogen oxides (NO_x), Hydrogen chloride gas

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11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

Oral LD50	no data available
Inhalation LC50	no data available
Dermal LD50	no data available
Other Information on Acute Toxicity	no data available

11.2 Skin Corrosion/Irritation no data available

11.3 Serious Eye Damage/Eye Irritation

Eyes	no data available
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11.4 Respiratory or Skin Sensitization Components of the product may be absorbed into the body through the skin. Irritating to skin and mucous membranes.

11.5 Germ Cell Mutagenicity no data available

11.6 Carcinogenicity

IARC	No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP	No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA	No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

11.7 Reproductive Toxicity no data available

11.8 Teratogenicity no data available

11.9 Specific Target Organ Toxicity - Single Exposure no data available

11.10 Specific Target Organ Toxicity - Repeated Exposures no data available

11.11 Aspiration Hazard no data available

11.12 Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Toxic if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

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11.13 **Signs and Symptoms of Exposure** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

11.14 **Synergistic Effects** no data available

11.15 **Additional Information**

12. ECOLOGICAL INFORMATION

12.1 **Toxicity** no data available

12.2 **Persistence and Degradability** no data available

12.3 **Bioaccumulative Potential** no data available

12.4 **Mobility in Soil** no data available

12.5 **PBT and vPvB Assessment** no data available

12.6 **Other Adverse Effects** Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Product

Disposal should be in accordance with applicable regional, national and local laws and regulations.

S29 - Do not empty into drains

S57 - Use appropriate container to avoid environmental contamination

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

13.2 Contaminated Packaging

Disposal must be made according to official regulations.

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14. TRANSPORT INFORMATION

- 14.1 DOT (US) Not considered dangerous goods.
- 14.2 IMDG Not considered dangerous goods.
- 14.3 IATA Not considered dangerous goods.

15. REGULATORY INFORMATION

15.1 OSHA Hazards

Target Organ Effect, Toxic by ingestion, Irritant

15.2 SARA 302 Components

No chemicals in this product are required to be reported according to SARA Title III, Section 302.

15.3 SARA 313 Components

This product does not contain any chemicals with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.4 SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

15.5 Right to Know Components

	Component(s)	CAS-No.
Massachusetts	No components are subject to the Massachusetts Right to Know Act.	
Pennsylvania	Guanidine Hydrochloride	50-01-1
	Water	7732-18-5
New Jersey	Guanidine Hydrochloride	50-01-1
	Water	7732-18-5

15.6 California Prop. 65 Components

This product does not contain any chemicals listed in the State of California's Proposition 65.

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16. OTHER INFORMATION

16.1 Text for H-code(s) and R-phrases(s) used in Section 3

Acute Tox.	Acute toxicity
Eye Irrit.	Eye irritation
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
Skin Irrit.	Skin irritation

16.2 Further Information

The above information is believed to be correct but does not claim to be all inclusive. This document shall be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Omega Bio-tek, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Material Data Safety Sheet

Trade Name: CSPL Buffer

Revision Date: 01.24.2013

Version: 2.0

1. IDENTIFICATION OF PRODUCT AND COMPANY

1.1. Identification and Product Name

Product Name **CSPL Buffer**

1.2. Intended Use

Research Use Only

1.3. Manufacturer

Omega Bio-tek, Inc.

400 Pinnacle Way, Suite 450

Norcross, Georgia 30071

USA

Telephone 1-800-832-8896

Email info@omegabiotek.com

1.4. Emergency Telephone

If medical emergency, call 911.

Contact your local Poison Control Center.

2. HAZARD IDENTIFICATION

2.1. Emergency Overview

OSHA Hazards

No known OSHA hazards.

Target Organs

GHS Classification

Do not require GHS
Labeling

GHS Symbols

Signal Word

Hazard Statement(s)

Do not require GHS Hazard Statements.

Precautionary Statement(s)

Material Data Safety Sheet

Trade Name: CSPL Buffer

Revision Date: 01.24.2013

Version: 2.0

2.2 HMIS Classification

Health Hazard 0
Chronic Health Hazard 0
Flammability 0
Physical Hazards 0

2.3 NFPA Rating

Health Hazard 0
Fire 0
Reactivity Hazard 0

2.4 Potential Health Effects

Inhalation 0
Skin 0
Eyes 0
Ingestion

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Synonyms

N/A

Trade Name: C

3.2 Component

CETYL TRIMETHYL AMMONIUM BROMIDE
CAS-No. 57-09-0
EC-No. 200-311-3
Index-No.

Classification

Concentration

0.5-2.5%

4. FIRST AID MEASURES

4.1 General Advice

Consult a physician in case of complaints. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

4.2 If Inhaled

Supply fresh air; consult doctor in case of complaints.

4.3 In Case of Skin Contact

Immediately wash with water and soap and rinse thoroughly

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4.4 In Case of Eye Contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

4.5 If Swallowed

Immediately call a doctor.

5. FIREFIGHTING MEASURES

5.1 Conditions of Flammability

Not flammable or combustible

5.2 Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.3 Special Protective Equipment for Firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Hazardous Combustion Products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide gas

5.5 Further Information

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Ensure adequate ventilation. Use Personnel Protective Equipment.

6.2 Environmental Precautions

Do not allow product to reach sewage system or any water course

6.3 Methods and Materials for Containment and Cleaning Up

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

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Use Personnel Protective Equipment.

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7.2 Conditions for Safe Storage

No special requirements

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Components with Workplace Control Parameters

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

8.2 Personal Protective Equipment

Hand Protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye Protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and Body Protection

Laboratory Coat protecting against chemicals.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form	Liquid
Color	Colorless

9.2 Safety Data

pH	N/A
Melting Point/Freezing Point	N/A
Boiling Point	N/A
Flash Point	N/A
Ignition Temperature	N/A
Autoignition Temperature	N/A
Lower Explosion Limit	N/A

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Upper Explosion Limit	N/A
Vapor Pressure	N/A
Density	N/A
Water Solubility	N/A
Partition Coefficient: n-octanol/water	N/A
Relative Vapor Density	N/A
Odor	Odorless
Odor Threshold	N/A
Evaporation Rate	N/A

10. STABILITY AND REACTIVITY

10.1 Chemical Stability

No decomposition if used according to specifications

10.2 Possibility of Hazardous Reactions

Reacts with acids, alkalis and oxidizing agents

10.3 Conditions to Avoid

10.4 Materials to Avoid

acids, alkalis and oxidizing agents

10.5 Hazardous Decomposition Products

Danger of toxic pyrolysis products.

11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

Oral LD50 430 mg/kg (rat)

Inhalation LC50

Dermal LD50

Other Information on Acute Toxicity

11.2 Skin Corrosion/Irritation

Irritant to skin and mucous membranes.

11.3 Eye Irritation

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11.4 Respiratory or Skin Sensitization

11.5 Germ Cell Mutagenicity

11.6 Carcinogenicity

IARC

NTP

OSHA

11.7 Reproductive Toxicity

11.8 Teratogenicity

11.9 Specific Target Organ Toxicity -
Single Exposure

11.10 Specific Target Organ Toxicity -
Repeated Exposures

11.11 Aspiration Hazard

11.12 Potential Health Effects

Inhalation

Ingestion

Skin

Eyes

11.13 Signs and Symptoms of Exposure

11.14 Synergistic Effects

11.15 Additional Information

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Harmful to fish

12.2 Persistence and Degradability

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- 12.3 Bioaccumulative Potential N/A
- 12.4 Mobility in Soil N/A
- 12.5 PBT and vPvB Assessment N/A
- 12.6 Other Adverse Effects

13. DISPOSAL CONSIDERATIONS

13.1 Product

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

13.2 Contaminated Packaging

Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

14.1 DOT (US)

Proper Shipping Name	UN Number	Class	Packaging Group
N/A	N/A	N/A	N/A

Reportable Quantity (RQ) N/A

Marine Pollutant N/A

Poison Inhalation Hazard N/A

14.2 IMDG

Proper Shipping Name	UN Number	Class	Packaging Group
N/A	N/A	N/A	N/A

Marine Pollutant

Material Data Safety Sheet

Trade Name: CSPL Buffer

Revision Date: 01.24.2013

Version: 2.0

14.3 IATA

Proper Shipping Name	UN Number	Class	Packaging Group
N/A	N/A	N/A	N/A

15. REGULATORY INFORMATION

15.1 OSHA Hazards

None of the ingredients is listed.

15.2 SARA 302 Components

None of the ingredients is listed.

15.3 SARA 313 Components

None of the ingredients is listed.

15.4 SARA 311/312 Hazards

None of the ingredients is listed.

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.

Material Data Safety Sheet

Trade Name: CSPW1 Buffer

Revision Date: 08.01.2013

1. IDENTIFICATION OF PRODUCT AND COMPANY

1.1. Identification and Product Name

Product Name **CSPW1 Buffer**

1.2. Intended Use

Research Use Only

1.3. Manufacturer

Omega Bio-tek, Inc.

400 Pinnacle Way, Suite 450

Norcross, Georgia 30071

USA

Telephone 1-800-832-8896

Email info@omegabiotek.com

1.4. Emergency Telephone

If medical emergency, call 911.

Contact your local Poison Control Center.

2. HAZARD IDENTIFICATION

2.1. Emergency Overview

OSHA Hazards

Target Organ Effect, Corrosive

Target Organs

Teeth, Kidney

GHS Classification

Acute toxicity, Inhalation (Category 5)
Acute toxicity, Dermal (Category 5)
Skin corrosion (Category 1A)
Serious eye damage (Category 1)
Skin sensitization (Category 1)

GHS Symbols



Signal Word

Danger

Hazard Statement(s)

H226
H303

May cause fire or explosion; strong oxidizer
May be harmful if swallowed

Precautionary Statement(s)

Material Data Safety Sheet

Trade Name: CSPW1 Buffer

Revision Date: 08.01.2013

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.

2.2 HMIS Classification (Scale 0-4)

Health Hazard 1
Flammability 0
Physical Hazards 2

2.3 NFPA Rating (Scale 0-4)

Health Hazard 1
Fire 0
Reactivity Hazard 2

2.4 Potential Health Effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin Causes skin burns
Eyes Causes eye burns.
Ingestion May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Mixture of the substances listed below with nonhazardous additions.

3.2 Synonyms

3.3 Component	Classification	Concentration
Sodium Perchlorate NaClO ₄	Flam. Liq. 3;	25-50%
CAS-No. 7791-07-3		
EC-No. 231-511-9		
Index-No. 607-002-00-6		

Refer to Section 16 for full text of H-Statements and R-Phrases.

4. FIRST AID MEASURES



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4.1 General Advice

Exit to a safe area. Consult a physician. Seek medical attention.

4.2 If Inhaled

Move to fresh air. If not breathing, give artificial respiration. Seek medical attention.

4.3 In Case of Skin Contact

Exit to safe area. Take off contaminated clothing and shoes immediately. Wash thoroughly with soap and water. Seek medical attention.

4.4 In Case of Eye Contact

Flush eyes with clean water for a minimum of 15 minutes keeping eyes open. Seek medical attention. Continue rinsing eyes during transport to hospital.

4.5 If Swallowed

Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention.

5. FIREFIGHTING MEASURES

5.1 Conditions of Flammability

Not flammable or combustible.

5.2 Suitable Extinguishing Media

Dry powder, CO₂, water spray, or alcohol-resistant foam.

5.3 Special Protective Equipment for Firefighters

Wear self-contained breathing apparatus, if necessary.

5.4 Hazardous Combustion Products

Carbon oxides

5.5 Further Information

Prevent fire-fighting water from entering surface water or groundwater.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Wear respiratory protection. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. See Section 8: Exposure Controls/Personal Protection for further details.



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6.2 Environmental Precautions

Prevent further leakage if area is safe. Do not let product enter drains. Avoid discharge into the environment.

6.3 Methods and Materials for Containment and Cleaning Up

Use inert absorbent material to soak up spill. Dispose of as hazardous waste. Do not flush with water.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes. Avoid inhalation of vapor or mist.

7.2 Conditions for Safe Storage

Keep containers tightly closed in a dry, cool, and well-ventilated place. Protect from moisture.

7.3 Incompatible Products

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Components with workplace control parameters

Components	CAS-No.	Value	Control Parameters	Basis
N/A				

8.2 Personal Protective Equipment

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment. Use respirators that have been approved by NIOSH.

Hand Protection

Use gloves when handling this product. Inspect gloves prior to use for any visible damage. Use proper glove removal technique to prevent contact with skin. Dispose of gloves in accordance with applicable laws. Wash and dry hands after use.

Eye Protection

Use a face shield and/or safety goggles when handling this product. Use eye ware that has been approved by NIOSH.

Skin and Body Protection

Wear appropriate laboratory attire when handling this product such as gloves, long pants, closed-toe shoes, and laboratory coat.



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Hygiene Measures

Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form	liquid
Color	colorless

9.2 Safety Data

pH	no data available
Melting Point/Freezing Point	no data available
Boiling Point	no data available
Flash Point	no data available
Ignition Temperature	no data available
Autoignition Temperature	no data available
Lower Explosion Limit	no data available
Upper Explosion Limit	no data available
Vapor Pressure	no data available
Density	no data available
Water Solubility	no data available
Partition Coefficient: n-octanol/water	no data available
Relative Vapor Density	no data available
Odor	no data available
Odor Threshold	no data available
Evaporation Rate	no data available

10. STABILITY AND REACTIVITY

10.1 Chemical Stability

Stable under recommended storage conditions.

10.2 Possibility of Hazardous Reactions

no data available

10.3 Conditions to Avoid

Heating

10.4 Materials to Avoid



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Organic materials, Strong acids, Forms shock-sensitive mixtures with certain other materials., Powdered metals, Reducing agents, Magnesium

10.5 Hazardous Decomposition Products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Sodium oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

Oral LD50	Rat-2,100 mg/kg
Inhalation LC50	no data available
Dermal LD50	no data available
Other Information on Acute Toxicity	no data available

11.2 Skin Corrosion/Irritation no data available

11.3 Serious Eye Damage/Eye Irritation

Eyes no data available

11.4 Respiratory or Skin Sensitization no data available

11.5 Germ Cell Mutagenicity no data available

11.6 Carcinogenicity

IARC No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

11.7 Reproductive Toxicity no data available

11.8 Teratogenicity no data available

11.9 Specific Target Organ Toxicity - Single Exposure no data available

11.10 Specific Target Organ Toxicity - Repeated Exposures no data available

11.11 Aspiration Hazard no data available



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11.12 Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion	May be harmful if swallowed.
Skin	Causes skin burns.
Eyes	Causes eye burns.

11.13 Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation of vapors may cause spasm, inflammation and edema of the bronchi; spasm, inflammation and edema of the larynx. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

11.14 Synergistic Effects

no data available

11.15 Additional Information

RTECS: not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity	no data available
12.2 Persistence and Degradability	no data available
12.3 Bioaccumulative Potential	no data available
12.4 Mobility in Soil	no data available
12.5 PBT and vPvB Assessment	no data available
12.6 Other Adverse Effects	Maybe harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Product

Disposal should be in accordance with applicable regional, national and local laws and regulations.

S29 - Do not empty into drains

S57 - Use appropriate container to avoid environmental contamination

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

13.2 Contaminated Packaging

Disposal must be made according to official regulations.



Material Data Safety Sheet

Trade Name: CSPW1 Buffer

Revision Date: 08.01.2013

14. TRANSPORT INFORMATION

14.1 DOT (US)

Proper Shipping Name	UN Number	Class	Packaging Group
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14.2 IMDG

Proper Shipping Name	UN Number	Class	Packaging Group	EMS-No.
----------------------	-----------	-------	-----------------	---------

14.3 IATA

Proper Shipping Name	UN Number	Class	Packaging Group
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15. REGULATORY INFORMATION

15.1 OSHA Hazards

Target Organ Effect, Corrosive

15.2 SARA 302 Components

No chemicals in this product are required to be reported according to SARA Title III, Section 302.

15.3 SARA 313 Components

This product does not contain any chemicals with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.4 SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

15.5 Right to Know Components

	Component(s)	CAS-No.
Massachusetts	Sodium perchlorate	7791-07-3
Pennsylvania	Sodium perchlorate	7791-07-3
	Water	7732-18-5
New Jersey	Sodium perchlorate	7791-07-3
	Water	7732-18-5

15.6 California Prop. 65 Components

This product does not contain any chemicals listed in the State of California's Proposition 65.

16. OTHER INFORMATION

16.1 Text for H-code(s) and R-phrases(s) used in Section 3



Material Data Safety Sheet

Trade Name: CSPW1 Buffer

Revision Date: 08.01.2013

16.2 Further Information

The above information is believed to be correct but does not claim to be all inclusive. This document shall be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Omega Bio-tek, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.



Material Data Safety Sheet

Trade Name: CSPW2 Buffer

Revision Date: 08.01.2013

1. IDENTIFICATION OF PRODUCT AND COMPANY

1.1. Identification and Product Name

Product Name **CSPW2 Buffer**

1.2. Intended Use

Research Use Only

1.3. Manufacturer

Omega Bio-tek, Inc.

400 Pinnacle Way, Suite 450

Norcross, Georgia 30071

USA

Telephone 1-800-832-8896

Email info@omegabiotek.com

1.4. Emergency Telephone

If medical emergency, call 911.

Contact your local Poison Control Center.

2. HAZARD IDENTIFICATION

2.1. Emergency Overview

OSHA Hazards

Target Organ Effect, Corrosive

Target Organs

Teeth, Kidney

GHS Classification

Acute toxicity, Inhalation (Category 5)
Acute toxicity, Dermal (Category 5)
Skin corrosion (Category 1A)
Serious eye damage (Category 1)
Skin sensitization (Category 1)

GHS Symbols



Signal Word

Danger

Hazard Statement(s)

H226
H303

May cause fire or explosion; strong oxidizer
May be harmful if swallowed

Precautionary Statement(s)



Material Data Safety Sheet

Trade Name: CSPW2 Buffer

Revision Date: 08.01.2013

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.

2.2 HMIS Classification (Scale 0-4)

Health Hazard 1
Flammability 0
Physical Hazards 2

2.3 NFPA Rating (Scale 0-4)

Health Hazard 1
Fire 0
Reactivity Hazard 2

2.4 Potential Health Effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin Causes skin burns
Eyes Causes eye burns.
Ingestion May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Mixture of the substances listed below with nonhazardous additions.

3.2 Synonyms

3.3 Component	Classification	Concentration
Sodium Perchlorate NaClO ₄	Flam. Liq. 3;	25-50%
CAS-No. 7791-07-3		
EC-No. 231-511-9		
Index-No. 607-002-00-6		

Refer to Section 16 for full text of H-Statements and R-Phrases.

4. FIRST AID MEASURES



Material Data Safety Sheet

Trade Name: CSPW2 Buffer

Revision Date: 08.01.2013

4.1 General Advice

Exit to a safe area. Consult a physician. Seek medical attention.

4.2 If Inhaled

Move to fresh air. If not breathing, give artificial respiration. Seek medical attention.

4.3 In Case of Skin Contact

Exit to safe area. Take off contaminated clothing and shoes immediately. Wash thoroughly with soap and water. Seek medical attention.

4.4 In Case of Eye Contact

Flush eyes with clean water for a minimum of 15 minutes keeping eyes open. Seek medical attention. Continue rinsing eyes during transport to hospital.

4.5 If Swallowed

Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention.

5. FIREFIGHTING MEASURES

5.1 Conditions of Flammability

Not flammable or combustible.

5.2 Suitable Extinguishing Media

Dry powder, CO₂, water spray, or alcohol-resistant foam.

5.3 Special Protective Equipment for Firefighters

Wear self-contained breathing apparatus, if necessary.

5.4 Hazardous Combustion Products

Carbon oxides

5.5 Further Information

Prevent fire-fighting water from entering surface water or groundwater.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Wear respiratory protection. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. See Section 8: Exposure Controls/Personal Protection for further details.



Material Data Safety Sheet

Trade Name: CSPW2 Buffer

Revision Date: 08.01.2013

6.2 Environmental Precautions

Prevent further leakage if area is safe. Do not let product enter drains. Avoid discharge into the environment.

6.3 Methods and Materials for Containment and Cleaning Up

Use inert absorbent material to soak up spill. Dispose of as hazardous waste. Do not flush with water.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes. Avoid inhalation of vapor or mist.

7.2 Conditions for Safe Storage

Keep containers tightly closed in a dry, cool, and well-ventilated place. Protect from moisture.

7.3 Incompatible Products

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Components with workplace control parameters

Components	CAS-No.	Value	Control Parameters	Basis
N/A				

8.2 Personal Protective Equipment

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment. Use respirators that have been approved by NIOSH.

Hand Protection

Use gloves when handling this product. Inspect gloves prior to use for any visible damage. Use proper glove removal technique to prevent contact with skin. Dispose of gloves in accordance with applicable laws. Wash and dry hands after use.

Eye Protection

Use a face shield and/or safety goggles when handling this product. Use eye ware that has been approved by NIOSH.

Skin and Body Protection

Wear appropriate laboratory attire when handling this product such as gloves, long pants, closed-toe shoes, and laboratory coat.



Material Data Safety Sheet

Trade Name: CSPW2 Buffer

Revision Date: 08.01.2013

Hygiene Measures

Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form	liquid
Color	colorless

9.2 Safety Data

pH	no data available
Melting Point/Freezing Point	no data available
Boiling Point	no data available
Flash Point	no data available
Ignition Temperature	no data available
Autoignition Temperature	no data available
Lower Explosion Limit	no data available
Upper Explosion Limit	no data available
Vapor Pressure	no data available
Density	no data available
Water Solubility	no data available
Partition Coefficient: n-octanol/water	no data available
Relative Vapor Density	no data available
Odor	no data available
Odor Threshold	no data available
Evaporation Rate	no data available

10. STABILITY AND REACTIVITY

10.1 Chemical Stability

Stable under recommended storage conditions.

10.2 Possibility of Hazardous Reactions

no data available

10.3 Conditions to Avoid

Heating

10.4 Materials to Avoid



Material Data Safety Sheet

Trade Name: CSPW2 Buffer

Revision Date: 08.01.2013

Organic materials, Strong acids, Forms shock-sensitive mixtures with certain other materials., Powdered metals, Reducing agents, Magnesium

10.5 Hazardous Decomposition Products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Sodium oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

Oral LD50	Rat-2,100 mg/kg
Inhalation LC50	no data available
Dermal LD50	no data available
Other Information on Acute Toxicity	no data available

11.2 Skin Corrosion/Irritation no data available

11.3 Serious Eye Damage/Eye Irritation

Eyes no data available

11.4 Respiratory or Skin Sensitization no data available

11.5 Germ Cell Mutagenicity no data available

11.6 Carcinogenicity

IARC No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

11.7 Reproductive Toxicity no data available

11.8 Teratogenicity no data available

11.9 Specific Target Organ Toxicity - Single Exposure no data available

11.10 Specific Target Organ Toxicity - Repeated Exposures no data available

11.11 Aspiration Hazard no data available



Material Data Safety Sheet

Trade Name: CSPW2 Buffer

Revision Date: 08.01.2013

11.12 Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion	May be harmful if swallowed.
Skin	Causes skin burns.
Eyes	Causes eye burns.

11.13 Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation of vapors may cause spasm, inflammation and edema of the bronchi; spasm, inflammation and edema of the larynx. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

11.14 Synergistic Effects

no data available

11.15 Additional Information

RTECS: not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity	no data available
12.2 Persistence and Degradability	no data available
12.3 Bioaccumulative Potential	no data available
12.4 Mobility in Soil	no data available
12.5 PBT and vPvB Assessment	no data available
12.6 Other Adverse Effects	Maybe harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Product

Disposal should be in accordance with applicable regional, national and local laws and regulations.

S29 - Do not empty into drains

S57 - Use appropriate container to avoid environmental contamination

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

13.2 Contaminated Packaging

Disposal must be made according to official regulations.



Material Data Safety Sheet

Trade Name: CSPW2 Buffer

Revision Date: 08.01.2013

14. TRANSPORT INFORMATION

14.1 DOT (US)

Proper Shipping Name	UN Number	Class	Packaging Group
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14.2 IMDG

Proper Shipping Name	UN Number	Class	Packaging Group	EMS-No.
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14.3 IATA

Proper Shipping Name	UN Number	Class	Packaging Group
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15. REGULATORY INFORMATION

15.1 OSHA Hazards

Target Organ Effect, Corrosive

15.2 SARA 302 Components

No chemicals in this product are required to be reported according to SARA Title III, Section 302.

15.3 SARA 313 Components

This product does not contain any chemicals with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.4 SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

15.5 Right to Know Components

	Component(s)	CAS-No.
Massachusetts	Sodium perchlorate	7791-07-3
Pennsylvania	Sodium perchlorate	7791-07-3
	Water	7732-18-5
New Jersey	Sodium perchlorate	7791-07-3
	Water	7732-18-5

15.6 California Prop. 65 Components

This product does not contain any chemicals listed in the State of California's Proposition 65.

16. OTHER INFORMATION

16.1 Text for H-code(s) and R-phrases(s) used in Section 3



Material Data Safety Sheet

Trade Name: CSPW2 Buffer

Revision Date: 08.01.2013

16.2 Further Information

The above information is believed to be correct but does not claim to be all inclusive. This document shall be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Omega Bio-tek, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.



Material Safety Data Sheet

Trade Name: Proteinase K Solution

Revision Date: 07/01/2013

1. IDENTIFICATION OF PRODUCT AND COMPANY

1.1. Identification and Product Name

Product Name

1.2. Intended Use

Research Use Only

1.3. Manufacturer

Omega Bio-tek, Inc.

400 Pinnacle Way, Suite 450

Norcross, Georgia 30071

USA

Telephone 1-800-832-8896

Email info@omegabiotek.com

1.4. Emergency Telephone

If medical emergency, call 911.

Contact your local Poison Control Center.

2. HAZARD IDENTIFICATION

2.1. Emergency Overview

OSHA Hazards

Target Organ Effect,
Respiratory Sensitiser
Irritant

GHS Classification:

Skin Irritation

Eye Irritation

Respiratory Sensitization

Specific Target Organ Toxicity-Single Exposure

GHS Symbols



Signal Word : Danger

Hazard Statement(s):

H315

Causes skin irritation

H319

Causes serious eye irritation

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335

May cause respiratory irritation.

Material Data Safety Sheet

Trade Name: Proteinase K Solution

Revision Date: 07/01/2013

Precautionary Statement(s)

P280 Wear protective gloves/protective clothing/eye protection/face protection
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

2.2 HMIS Classification (Scale 0-4)

Health Hazard 2
Flammability 0
Physical Hazards 0

2.3 NFPA Rating (Scale 0-4)

Health Hazard 2
Fire 0
Reactivity Hazard 0

2.4 Potential Health Effects

Inhalation May cause respiratory tract irritation
Skin May be harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Mixture of the substances listed below with nonhazardous additions.

3.2 Synonyms

Endopeptidase K

3.3 Component

Proteinase K

Cas No.	39450-01-6	Skin Irrit. 2; Eye Irrit. 2; Resp. Sens. 1; STOT SE 3; H315, H319, H334, H335
EC No.	254-457-8	
Index No.	647-014-00-9	

Glycerol

Cas No.	56-81-5	30-60%
EC No.	200-289-5	
Index No.		

Refer to Section 16 for full text of H-Statements and R-Phrases.

Material Data Safety Sheet

Trade Name: Proteinase K Solution

Revision Date: 07/01/2013

4. FIRST AID MEASURES

4.1 General Advice

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

4.2 If Inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

4.3 In Case of Skin Contact

Wash off with soap and plenty of water. Consult a physician.

4.4 In Case of Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

4.5 If Swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

5.1 Conditions of Flammability

Not flammable or combustible.

5.2 Suitable Extinguishing Media

Dry powder, CO₂, water spray, or alcohol-resistant foam.

5.3 Special Protective Equipment for Firefighters

Wear self-contained breathing apparatus, if necessary.

5.4 Hazardous Combustion Products

Sodium oxides

5.5 Further Information

Prevent fire-fighting water from entering surface water or groundwater.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Material Data Safety Sheet

Trade Name: Proteinase K Solution

Revision Date: 07/01/2013

6.2 Environmental Precautions

Do not let product enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for Safe Storage

Keep container tightly closed in a dry and well-ventilated place. Recommended Storage Temperature -20°C

7.3 Incompatible Products

N/A

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Components with workplace control parameters

Components	CAS-No.	Value	Control Parameters	Basis
Glycerol	56-81-5	TWA	10 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	5 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	10 mg/m3	USA. ACGIH Threshold Limit Values (TLV)

8.2 Personal Protective Equipment

Respiratory Protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand Protection

Use gloves when handling this product. Inspect gloves prior to use for any visible damage. Use proper glove removal technique to prevent contact with skin. Dispose of gloves in accordance with applicable laws. Wash and dry hands after use.

Eye Protection

Material Data Safety Sheet

Trade Name: Proteinase K Solution

Revision Date: 07/01/2013

Use a face shield and/or safety goggles when handling this product. Use eye ware that has been approved by NIOSH.

Skin and Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene Measures

Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form	Powder
Color	no data available

9.2 Safety Data

pH	no data available
Melting Point/Freezing Point	no data available
Boiling Point	no data available
Flash Point	no data available
Ignition Temperature	no data available
Autoignition Temperature	no data available
Lower Explosion Limit	no data available
Upper Explosion Limit	no data available
Vapor Pressure	no data available
Density	no data available
Water Solubility	no data available
Partition Coefficient: n-octanol/water	no data available
Relative Vapor Density	no data available
Odor	no data available
Odor Threshold	no data available
Evaporation Rate	no data available

10. STABILITY AND REACTIVITY

10.1 Chemical Stability

Stable under recommended storage conditions.

10.2 Possibility of Hazardous Reactions

N/A

Material Data Safety Sheet

Trade Name: Proteinase K Solution

Revision Date: 07/01/2013

10.3 Conditions to Avoid

N/A

10.4 Materials to Avoid

N/A

10.5 Hazardous Decomposition Products

N/A

11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

Oral LD50 no data available

Inhalation LC50 no data available

Dermal LD50 no data available

Other Information on Acute Toxicity no data available

11.2 Skin Corrosion/Irritation

no data available

11.3 Serious Eye Damage/Eye Irritation

Eyes no data available

11.4 Respiratory or Skin Sensitization

no data available

11.5 Germ Cell Mutagenicity

no data available

11.6 Carcinogenicity

IARC No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

11.7 Reproductive Toxicity

no data available

11.8 Teratogenicity

no data available

11.9 Specific Target Organ Toxicity - Single Exposure

no data available

Material Data Safety Sheet

Trade Name: Proteinase K Solution

Revision Date: 07/01/2013

- | | | |
|-------|--|---|
| 11.10 | Specific Target Organ Toxicity - Repeated Exposures | no data available |
| 11.11 | Aspiration Hazard | no data available |
| 11.12 | Potential Health Effects | |
| | Inhalation | May be harmful if inhaled. Causes respiratory tract irritation. |
| | Ingestion | May be harmful if swallowed. |
| | Skin | May be harmful if absorbed through skin. |
| | Eyes | Causes eye irritation. |
| 11.13 | Signs and Symptoms of Exposure | |
| 11.14 | Synergistic Effects | no data available |
| 11.15 | Additional Information | RTECS: not available |

12. ECOLOGICAL INFORMATION

- | | | |
|------|--------------------------------------|-------------------|
| 12.1 | Toxicity | no data available |
| 12.2 | Persistence and Degradability | no data available |
| 12.3 | Bioaccumulative Potential | no data available |
| 12.4 | Mobility in Soil | no data available |
| 12.5 | PBT and vPvB Assessment | no data available |
| 12.6 | Other Adverse Effects | no data available |

13. DISPOSAL CONSIDERATIONS

- | | | |
|------|----------------|---|
| 13.1 | Product | |
| | | Disposal should be in accordance with applicable regional, national and local laws and regulations. |

Material Data Safety Sheet

Trade Name: Proteinase K Solution

Revision Date: 07/01/2013

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

13.2 Contaminated Packaging

Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

14.1	DOT (US)	Not considered dangerous goods
14.2	IMDG	Not considered dangerous goods
14.3	IATA	Not considered dangerous goods

15. REGULATORY INFORMATION

15.1 OSHA Hazards

Target Organ Effect, Respiratory sensitiser, Irritant

15.2 SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

15.3 SARA 313 Components

This product does not contain any chemicals with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.4 SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

15.5 Right to Know Components

	Component(s)	CAS-No.
Massachusetts	Glycerol	56-81-5
	Proteinase K	39450-01-6
Pennsylvania	Water	7732-18-5
	Glycerol	56-81-5
	Proteinase K	39450-01-6
New Jersey	Water	7732-18-5
	Glycerol	56-81-5
	Proteinase K	39450-01-6

Material Data Safety Sheet

Trade Name: Proteinase K Solution

Revision Date: 07/01/2013

15.6 California Prop. 65 Components

This product does not contain any chemicals listed in the State of California's Proposition 65.

16. OTHER INFORMATION

16.1 Text for H-code(s) and R-phrases(s) used in Section 3

N/A

16.2 Further Information

The above information is believed to be correct but does not claim to be all inclusive. This document shall be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Omega Bio-tek, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Material Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 08.28.2014

Version: 2.0

1. IDENTIFICATION OF PRODUCT AND COMPANY

1.1. Identification and Product Name

Product Name RBB Buffer

1.2. Intended Use

Research Use Only

1.3. Manufacturer

Omega Bio-tek, Inc.

400 Pinnacle Way, Suite 450

Norcross, Georgia 30071

USA

Telephone 1-800-832-8896

Email info@omegabiotek.com

1.4. Emergency Telephone

If medical emergency, call 911.

Contact your local Poison Control Center.

2. HAZARD IDENTIFICATION

2.1. Emergency Overview

OSHA Hazards

Toxic by Inhalation, Harmful by Ingestion

Target Organs

not applicable

GHS Classification

Acute Toxicity, Inhalation (Category 3)
Acute Toxicity, Oral (Category 4)
Acute Aquatic Toxicity (Category 3)

GHS Symbols



Signal Word

DANGER

Hazard Statement(s)

H226 Flammable liquid and vapour
H302 Harmful if Swallowed
H331 Toxic if Inhaled
H402 Harmful to Aquatic Life

Precautionary Statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P311 Call a Poison Control Center or physician.

Material Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 08.28.2014

Version: 2.0

2.2 HMIS Classification (Scale 0-4)

Health Hazard 2
Flammability 2
Physical Hazards 0

2.3 NFPA Rating (Scale 0-4)

Health Hazard 2
Fire 2
Reactivity Hazard 0

2.4 Potential Health Effects

Inhalation Toxic if Inhaled. May cause respiratory tract irritation.
Skin Harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Harmful if swallowed.
Aggravated Medical Condition May cause nervous system disturbances.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Mixture of the substances listed below with nonhazardous additions.

3.2 Synonyms

Guanidinium thiocyanate
Guanidinium rhodanide
Guanidinium isothiocyanate
Guanidine isothiocyanate

Ethanol

Ethyl Alcohol

3.3 Component

Guanidine Thiocyanate
CH₅N₃ x CHNS

CAS-No. 593-84-0
EC-No. 209-812-1
Index-No. 615-030-00-5

Classification

Acute Tox. 4; Skin Corr. 1C; Aquatic Chronic 3;
H302 + H312 + H332, H314, H412, EUH032

Concentration

25-50%

Material Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 08.28.2014

Version: 2.0

Ethanol		Flam. Liq. 2; H225	10-20%
C_2H_6O			
CAS-No.	64-17-5		
EC-No.	200-578-6		
Index-No.	603-002-00-5		

Refer to Section 16 for full text of H-Statements and R-Phrases.

4. FIRST AID MEASURES

4.1 General Advice

Exit to a safe area. Consult a physician. Seek medical attention.

4.2 If Inhaled

Move to fresh air. If not breathing, give artificial respiration. Seek medical attention.

4.3 In Case of Skin Contact

Exit to safe area. Wash thoroughly with soap and water. Seek medical attention.

4.4 In Case of Eye Contact

Flush eyes with clean water for a minimum of 15 minutes keeping eyes open. Seek medical attention.

4.5 If Swallowed

Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention.

5. FIREFIGHTING MEASURES

5.1 Conditions of Flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

5.2 Suitable Extinguishing Media

Dry powder, CO_2 , water spray, or regular foam.

5.3 Special Protective Equipment for Firefighters

Wear self-contained breathing apparatus, if necessary.

5.4 Hazardous Combustion Products

Carbon oxides (CO , CO_2), Sulfur Oxides (SOx), Nitrogen oxides (NOx).

5.5 Further Information

Prevent fire-fighting water from entering surface water or groundwater.

Material Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 08.28.2014

Version: 2.0

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Wear respiratory protection. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. See Section 8: Exposure Controls/Personal Protection for further details.

6.2 Environmental Precautions

Prevent further leakage if area is safe. Do not let product enter drains. Avoid discharge into the environment.

6.3 Methods and Materials for Containment and Cleaning Up

Use inert absorbent material to soak up spill. Dispose of as hazardous waste. Do not flush with water.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes. Avoid inhalation of vapor or mist.

7.2 Conditions for Safe Storage

Keep containers tightly closed in a dry, cool, and well-ventilated place. Protect from moisture.

7.3 Incompatible Products

Strong oxidizing agents. Strong Acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Components with workplace control parameters

Components	CAS-No.	Value	Control Parameters	Basis
Ethanol	64-17-5	TWA	1000 ppm 1900 mg/m ³	OSHA PEL
		STEL	1000 ppm	OSHA PEL

8.2 Personal Protective Equipment

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment. Use respirators that have been approved by NIOSH.

Hand Protection

Use gloves when handling this product. Inspect gloves prior to use for any visible damage. Use proper glove removal technique to prevent contact with skin. Dispose of gloves in accordance with applicable laws. Wash and dry hands after use.

Material Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 08.28.2014

Version: 2.0

Eye Protection

Use a face shield and/or safety goggles when handling this product. Use eye ware that has been approved by NIOSH.

Skin and Body Protection

Wear appropriate laboratory attire when handling this product such as gloves, long pants, closed-toe shoes, and laboratory coat.

Hygiene Measures

Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form	liquid
Color	Clear

9.2 Safety Data

pH	5.0-7.0
Melting Point/Freezing Point	no data available
Boiling Point	no data available
Flash Point	no data available
Ignition Temperature	no data available
Autoignition Temperature	no data available
Lower Explosion Limit	no data available
Upper Explosion Limit	no data available
Vapor Pressure	no data available
Density	no data available
Water Solubility	no data available
Partition Coefficient: n-octanol/water	no data available
Relative Vapor Density	no data available
Odor	no data available
Odor Threshold	no data available
Evaporation Rate	no data available

10. STABILITY AND REACTIVITY

10.1 Chemical Stability

Stable under recommended storage conditions.

10.2 Possibility of Hazardous Reactions

no data available

Material Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 08.28.2014

Version: 2.0

10.3 Conditions to Avoid

Heating

10.4 Materials to Avoid

Strong acids, strong oxidizing agents, cyanides

10.5 Hazardous Decomposition Products

Carbon oxides (COx), Sulfur Oxides (SOx), Nitrogen oxides (NOx), hydrogen cyanide, ammonia

11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

Oral LD50	282 mg/kg (rat)
Inhalation LC50	no data available
Dermal LD50	no data available
Other Information on Acute Toxicity	no data available

11.2 Skin Corrosion/Irritation no data available

11.3 Serious Eye Damage/Eye Irritation

Eyes no data available

11.4 Respiratory or Skin Sensitization

Components of the product may be absorbed into the body through the skin. Irritating to skin and mucous membranes.

11.5 Germ Cell Mutagenicity no data available

11.6 Carcinogenicity

IARC	No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP	No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA	No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

11.7 Reproductive Toxicity no data available

11.8 Teratogenicity no data available

11.9 Specific Target Organ Toxicity - Single Exposure no data available

Material Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 08.28.2014

Version: 2.0

11.10	Specific Target Organ Toxicity - Repeated Exposures	no data available
11.11	Aspiration Hazard	no data available
11.12	Potential Health Effects	
	Inhalation	Toxic if inhaled. May cause respiratory irritation.
	Ingestion	Harmful if swallowed.
	Skin	Harmful if absorbed through skin. May cause skin irritation.
	Eyes	May cause eye irritation.
11.13	Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
11.14	Synergistic Effects	no data available
11.15	Additional Information	

12. ECOLOGICAL INFORMATION

12.1	Toxicity	no data available
12.2	Persistence and Degradability	no data available
12.3	Bioaccumulative Potential	no data available
12.4	Mobility in Soil	no data available
12.5	PBT and vPvB Assessment	no data available
12.6	Other Adverse Effects	Harmful to aquatic life.

Material Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 08.28.2014

Version: 2.0

13. DISPOSAL CONSIDERATIONS

13.1 Product

Disposal should be in accordance with applicable regional, national and local laws and regulations.

S29 - Do not empty into drains

S57 - Use appropriate container to avoid environmental contamination

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

13.2 Contaminated Packaging

Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

14.1 DOT (US) Not considered dangerous goods.

14.2 IMDG Not considered dangerous goods.

14.3 IATA Not considered dangerous goods.

15. REGULATORY INFORMATION

15.1 OSHA Hazards

Toxic by inhalation.

Harmful by ingestion.

15.2 SARA 302 Components

No chemicals in this product are required to be reported according to SARA Title III, Section 302.

15.3 SARA 313 Components

This product does not contain any chemicals with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.4 SARA 311/312 Hazards

Acute Health Hazard

Material Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 08.28.2014

Version: 2.0

15.5 Right to Know Components

	Component(s)	CAS-No.
Massachusetts	64-17-5	
Pennsylvania	Guanidine Thiocyanate	593-84-0
	Water	7732-18-5
	Ethanol	64-17-5
New Jersey	Guanidine Thiocyanate	593-84-0
	Water	7732-18-5
	Ethanol	64-17-5

15.6 California Prop. 65 Components

This product does not contain any chemicals listed in the State of California's Proposition 65.

16. OTHER INFORMATION

16.1 Text for H-code(s) and R-phrases(s) used in Section 3

Acute Tox.	Acute Toxicity
Aquatic Chronic	Chronic Aquatic Toxicity
EUH032	Contact with acids liberates very toxic gases.
H302 + H312 + H332	Harmful if swallowed, in contact with skin, or if inhaled.
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.
Skin Corr.	Skin Corrosion

16.2 Further Information

The above information is believed to be correct but does not claim to be all inclusive. This document shall be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Omega Bio-tek, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Material Safety Data Sheet

Trade Name RNase A

Revision Date: 09/09/2014

1. IDENTIFICATION OF PRODUCT AND COMPANY

1.1. Identification and Product Name

Product Name RNase A

1.2. Intended Use

Research Use Only

1.3. Manufacturer

Omega Bio-tek, Inc.

400 Pinnacle Way, Suite 450

Norcross, Georgia 30071

USA

Telephone 1-800-832-8896

Email info@omegabiotek.com

1.4. Emergency Telephone

If medical emergency, call 911.

Contact your local Poison Control Center.

2. HAZARD IDENTIFICATION

2.1. Emergency Overview

OSHA Hazards:

Target Organ Effect,
Respiratory Sensitizer

GHS Classification:

Skin Sensitizer (Category 1)

Respiratory Sensitizer (Category 1)

GHS Symbols



Signal Word : Danger

Hazard Statement(s):

H317
H334

May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Material Safety Data Sheet

Trade Name RNase A

Revision Date: 09/09/2014

Precautionary Statement(s)

P261 P280	Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 P304 + P340	IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.2 HMIS Classification (Scale 0-4)

Health Hazard	1
Flammability	1
Physical Hazards	0

2.3 NFPA Rating (Scale 0-4)

Health Hazard	1
Fire	1
Reactivity Hazard	0

2.4 Potential Health Effects

Inhalation	May cause respiratory tract irritation
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Mixture of the substances listed below with nonhazardous additions.

3.2 Synonyms

Ribonuclease A
Ribonuclease I
Ribonuclease 3' pyrimidinooligonucleotidohydrolase
Pancreatic Ribonuclease

3.3 Component	Classification	Concentration
RNase A		
Cas No.	9001-99-4	1-3%
EC No.	232-646-6	

Material Safety Data Sheet

Trade Name RNase A

Revision Date: 09/09/2014

Glycerol

Cas No. 56-81-5 30-60%
EC No. 200-289-5

Refer to Section 16 for full text of H-Statements and R-Phrases.

4. FIRST AID MEASURES

4.1 General Advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

4.2 If Inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

4.3 In Case of Skin Contact

Wash off with soap and plenty of water. Consult a physician.

4.4 In Case of Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

4.5 If Swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

5.1 Conditions of Flammability

Not flammable or combustible.

5.2 Suitable Extinguishing Media

Dry powder, CO₂, water spray, or alcohol-resistant foam.

5.3 Special Protective Equipment for Firefighters

Wear self-contained breathing apparatus, if necessary.

5.4 Hazardous Combustion Products

Carbon oxides, Nitrogen oxides (NOx)

5.5 Further Information

Prevent fire-fighting water from entering surface water or groundwater.

Material Safety Data Sheet

Trade Name RNase A

Revision Date: 09/09/2014

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Use personal protective equipment. Avoid breathing vapors or mist. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation.

6.2 Environmental Precautions

Do not let product enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

7.2 Conditions for Safe Storage

Keep container tightly closed in a dry and well-ventilated place. Recommended Storage Temperature 2-8°C

7.3 Incompatible Products

N/A

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Components with workplace control parameters

Components	CAS-No.	Value	Control Parameters	Basis
Glycerol	56-81-5	TWA	10 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	5 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	10 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract Irritation		
		TWA	5 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	15 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

Personal Protective Equipment

Respiratory Protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Material Safety Data Sheet

Trade Name RNase A

Revision Date: 09/09/2014

Hand Protection

Use gloves when handling this product. Inspect gloves prior to use for any visible damage. Use proper glove removal technique to prevent contact with skin. Dispose of gloves in accordance with applicable laws. Wash and dry hands after use.

Eye Protection

Use a face shield and/or safety goggles when handling this product. Use eye ware that has been approved by NIOSH.

Skin and Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene Measures

Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form	Liquid
Color	Slightly Yellow

9.2 Safety Data

pH	no data available
Melting Point/Freezing Point	no data available
Boiling Point	no data available
Flash Point	no data available
Ignition Temperature	no data available
Autoignition Temperature	no data available
Lower Explosion Limit	no data available
Upper Explosion Limit	no data available
Vapor Pressure	no data available
Density	no data available
Water Solubility	no data available
Partition Coefficient: n-octanol/water	no data available
Relative Vapor Density	no data available
Odor	no data available
Odor Threshold	no data available
Evaporation Rate	no data available

Material Safety Data Sheet

Trade Name RNase A

Revision Date: 09/09/2014

10. STABILITY AND REACTIVITY

10.1 Chemical Stability

Stable under recommended storage conditions.

10.2 Possibility of Hazardous Reactions

N/A

10.3 Conditions to Avoid

N/A

10.4 Materials to Avoid

N/A

10.5 Hazardous Decomposition Products

N/A

11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

Oral LD50

RNase A

no data available

Glycerol

12,600 mg/kg (rat)

Inhalation LC50

no data available

Dermal LD50

no data available

>10,000 mg/kg (rabbit)

Other Information on Acute Toxicity

no data available

11.2 Skin Corrosion/Irritation

no data available

Mild skin irritation 24 hrs (rabbit)

11.3 Serious Eye Damage/Eye Irritation

no data available

Mild eye irritation 24 hrs (rabbit)

11.4 Respiratory or Skin Sensitization

no data available

11.5 Germ Cell Mutagenicity

no data available

11.6 Carcinogenicity

IARC

No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP

No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA

No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Material Safety Data Sheet

Trade Name RNase A

Revision Date: 09/09/2014

11.7	Reproductive Toxicity	no data available
11.8	Teratogenicity	no data available
11.9	Specific Target Organ Toxicity - Single Exposure	no data available
11.10	Specific Target Organ Toxicity - Repeated Exposures	no data available
11.11	Aspiration Hazard	no data available
11.12	Potential Health Effects	
	Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
	Ingestion	May be harmful if swallowed.
	Skin	May be harmful if absorbed through skin.
	Eyes	Causes eye irritation.
11.13	Signs and Symptoms of Exposure	Prolonged or repeated exposure may cause; Headache, Nausea, Vomiting
11.14	Synergistic Effects	no data available
11.15	Additional Information	RTECS: not available

12. ECOLOGICAL INFORMATION

12.1	Toxicity	no data available
12.2	Persistence and Degradability	no data available
12.3	Bioaccumulative Potential	no data available
12.4	Mobility in Soil	no data available
12.5	PBT and vPvB Assessment	no data available
12.6	Other Adverse Effects	no data available

Material Safety Data Sheet

Trade Name RNase A

Revision Date: 09/09/2014

13. DISPOSAL CONSIDERATIONS

13.1 Product

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.

13.2 Contaminated Packaging

Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

14.1	DOT (US)	Not considered dangerous goods
14.2	IMDG	Not considered dangerous goods
14.3	IATA	Not considered dangerous goods

15. REGULATORY INFORMATION

15.1 OSHA Hazards

Target Organ Effect

15.2 SARA 302 Components

No chemicals in this product are required to be reported according to SARA Title III, Section 302.

15.3 SARA 313 Components

This product does not contain any chemicals with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.4 SARA 311/312 Hazards

Acute Health Hazard

15.5 Right to Know Components

	Component(s)	CAS-No.
Massachusetts	Glycerol	56-81-5
Pennsylvania	Water	7732-18-5
	Glycerol	56-81-5
New Jersey	Water	7732-18-5
	Glycerol	56-81-5
	Ribonuclease	9001-99-4

15.6 California Prop. 65 Components

This product does not contain any chemicals listed in the State of California's Proposition 65.

Material Safety Data Sheet

Trade Name RNase A

Revision Date: 09/09/2014

16. OTHER INFORMATION

16.1 Text for H-code(s) and R-phrases(s) used in Section 3

N/A

16.2 Further Information

The above information is believed to be correct but does not claim to be all inclusive. This document shall be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Omega Bio-tek, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Material Safety Data Sheet

Trade Name SPM Buffer

Revision Date: 01/14/2014

1. IDENTIFICATION OF PRODUCT AND COMPANY

1.1. Identification and Product Name

Product Name SPM Buffer

1.2. Intended Use

Research Use Only

1.3. Manufacturer

Omega Bio-tek, Inc.

400 Pinnacle Way, Suite 450

Norcross, Georgia 30071

USA

Telephone 1-800-832-8896

Email info@omegabiotek.com

1.4. Emergency Telephone

If medical emergency, call 911.

Contact your local Poison Control Center.

2. HAZARD IDENTIFICATION

2.1. Emergency Overview

OSHA Hazards

No known OSHA Hazards
Not a dangerous substance according GHS

GHS Classification

Not a dangerous substance according GHS

GHS Symbols

Signal Word : n/a

Hazard Statement(s): n/a

Precautionary Statement(s)

n/a

2.2. HMIS Classification (Scale 0-4)

Health Hazard 0

Flammability 0

Physical Hazards 0

Material Data Safety Sheet

Trade Name SPM Buffer

Revision Date: 01/14/2014

2.3 NFPA Rating (Scale 0-4)

Health Hazard 0
Fire 0
Reactivity Hazard 0

2.4 Potential Health Effects

Inhalation May cause respiratory tract irritation
Skin
Eyes
Ingestion May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Characterization

Mixture of the substances listed below with nonhazardous additions.

3.2 Synonyms

n/a

Trade Name

3.3 Component

n/a

Classification

Concentration

Refer to Section 16 for full text of H-Statements and R-Phrases.

4. FIRST AID MEASURES

4.1 General Advice

4.2 If Inhaled

If not breathing give artificial respiration

4.3 In Case of Skin Contact

N/A

4.4 In Case of Eye Contact

Material Data Safety Sheet

Trade Name SPM Buffer

Revision Date: 01/14/2014

4.5 If Swallowed

N/A.

5. FIREFIGHTING MEASURES

5.1 Conditions of Flammability

Not flammable or combustible.

5.2 Suitable Extinguishing Media

Dry powder, CO₂, water spray, or alcohol-resistant foam.

5.3 Special Protective Equipment for Firefighters

Wear self-contained breathing apparatus, if necessary.

5.4 Hazardous Combustion Products

5.5 Further Information

Prevent fire-fighting water from entering surface water or groundwater.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

6.2 Environmental Precautions

6.3 Methods and Materials for Containment and Cleaning Up

Use inert absorbent material to soak up spill.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes. Avoid inhalation of vapor or mist.

7.2 Conditions for Safe Storage

No special storage conditions required

Material Data Safety Sheet

Trade Name SPM Buffer

Revision Date: 01/14/2014

7.3 Incompatible Products

N/A

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Components with workplace control parameters

Components	CAS-No.	Value	Control Parameters	Basis
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8.2 Personal Protective Equipment

Respiratory Protection

No special protective equipment required.

Hand Protection

Use gloves when handling this product. Inspect gloves prior to use for any visible damage. Use proper glove removal technique to prevent contact with skin. Dispose of gloves in accordance with applicable laws. Wash and dry hands after use.

Eye Protection

Use a face shield and/or safety goggles when handling this product. Use eye ware that has been approved by NIOSH.

Skin and Body Protection

Wear appropriate laboratory attire when handling this product such as gloves, long pants, closed-toe shoes, and laboratory coat.

Hygiene Measures

Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form liquid
Color colorless

9.2 Safety Data

pH N/A
Melting Point/Freezing Point no data available
Boiling Point no data available
Flash Point no data available
Ignition Temperature no data available
Autoignition Temperature no data available

Material Data Safety Sheet

Trade Name SPM Buffer

Revision Date: 01/14/2014

Lower Explosion Limit	no data available
Upper Explosion Limit	no data available
Vapor Pressure	no data available
Density	no data available
Water Solubility	no data available
Partition Coefficient: n-octanol/water	no data available
Relative Vapor Density	no data available
Odor	no data available
Odor Threshold	no data available
Evaporation Rate	no data available

10. STABILITY AND REACTIVITY

10.1 Chemical Stability

Stable under recommended storage conditions.

10.2 Possibility of Hazardous Reactions

N/A

10.3 Conditions to Avoid

N/A

10.4 Materials to Avoid

N/A

10.5 Hazardous Decomposition Products

N/A

11. TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity

Oral LD50	no data available
Inhalation LC50	no data available
Dermal LD50	no data available
Other Information on Acute Toxicity	no data available

11.2 Skin Corrosion/Irritation

no data available

11.3 Serious Eye Damage/Eye Irritation

Eyes	no data available
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Material Data Safety Sheet

Trade Name SPM Buffer

Revision Date: 01/14/2014

11.4	Respiratory or Skin Sensitization	no data available
11.5	Germ Cell Mutagenicity	no data available
11.6	Carcinogenicity	
	IARC	No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
	ACGIH	No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
	NTP	No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
	OSHA	No component of this product that is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
11.7	Reproductive Toxicity	no data available
11.8	Teratogenicity	no data available
11.9	Specific Target Organ Toxicity - Single Exposure	no data available
11.10	Specific Target Organ Toxicity - Repeated Exposures	no data available
11.11	Aspiration Hazard	no data available
11.12	Potential Health Effects	
	Inhalation	N/A
	Ingestion	N/A
	Skin	N/A
	Eyes	N/A
11.13	Signs and Symptoms of Exposure	
11.14	Synergistic Effects	no data available
11.15	Additional Information	RTECS: not available

12. ECOLOGICAL INFORMATION

Material Data Safety Sheet

Trade Name SPM Buffer

Revision Date: 01/14/2014

12.1	Toxicity	no data available
12.2	Persistence and Degradability	no data available
12.3	Bioaccumulative Potential	no data available
12.4	Mobility in Soil	no data available
12.5	PBT and vPvB Assessment	no data available
12.6	Other Adverse Effects	no data available

13. DISPOSAL CONSIDERATIONS

13.1 Product

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.

13.2 Contaminated Packaging

Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

14.1	DOT (US)	Not considered dangerous goods
14.2	IMDG	Not considered dangerous goods
14.3	IATA	Not considered dangerous goods

15. REGULATORY INFORMATION

15.1 OSHA Hazards
N/A

15.2 SARA 302 Components
No chemicals in this product are required to be reported according to SARA Title III, Section 302.

15.3 SARA 313 Components

Material Data Safety Sheet

Trade Name SPM Buffer

Revision Date: 01/14/2014

This product does not contain any chemicals with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.4 SARA 311/312 Hazards

Acute Health Hazard

15.5 Right to Know Components

	Component(s)	CAS-No.
Massachusetts	Water	7732-18-5
Pennsylvania	Water	7732-18-5
New Jersey	Water	7732-18-5

15.6 California Prop. 65 Components

This product does not contain any chemicals listed in the State of California's Proposition 65.

16. OTHER INFORMATION

16.1 Text for H-code(s) and R-phrases(s) used in Section 3

N/A

16.2 Further Information

The above information is believed to be correct but does not claim to be all inclusive. This document shall be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Omega Bio-tek, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Material Data Safety Sheet

Trade Name SPM Buffer

Revision Date: 01/14/2014



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