

Safety Data Sheet

Trade Name: CSPL Buffer

Revision Date: 4/29/2016

SECTION 1. IDENTIFICATION OF PRODUCT AND COMPANY:

Product Name: CSPL Buffer

Manufacturer or Supplier Details:

Company Name: Omega Bio-tek, Inc.
Address: 400 Pinnacle Way, Suite 450
Norcross, GA 30071
USA
Telephone: 1-800-832-8896
Email: info@omegabiotek.com
Emergency Telephone: CHEMTREC
USA & Canada: 1-800-424-9300
Outside USA & Canada: 1-703-527-3887

Recommended Use of the Chemical and Restrictions on Use:

Recommended Use: For research use only.

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification:

Health Hazards: No known OSHA hazards.
Not a dangerous substance according to GHS.

GHS Label Element:

Hazard Symbol: N/A

Hazard Statements: Not a hazardous substance or mixture.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Substance or Mixture: Mixture of non-hazardous substances.

Synonyms/Common Names: N/A

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SECTION 4. FIRST AID MEASURES:

General Advice:	Wear protective gloves/protective clothing/eye protection/face protection.
If Inhaled:	If not breathing, give artificial respiration.
In Case of Skin Contact:	Wash with soap and water.
In Case of Eye Contact:	Remove contact lenses, if present and easy to do. Continue rinsing.
If Swallowed:	N/A
Most Important Symptoms and Effects, Acute and Delayed:	N/A
Recommendations for Immediate Medical Attention and Special Treatment:	Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES:

Conditions of Flammability:	Not flammable or combustible.
Suitable Extinguishing Media:	Dry powder, CO ₂ , water spray or regular foam.
Special Protective Equipment for Firefighters:	Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products:	N/A
Further Information:	Prevent firefighting water from entering surface water or groundwater.

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Trade Name: CSPL Buffer

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SECTION 6. ACCIDENTAL RELEASE MEASURES:

Personal Precautions:	Avoid inhalation of vapors or mist. See Section 8: Exposure Controls/ Personal Protection for more information.
Environmental Precautions:	N/A
Emergency Procedures:	Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up:	Use inert absorbent material to soak up spill.

SECTION 7. HANDLING AND STORAGE:

Precautions for Safe Handling:	Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors or mist.
Conditions for Safe Storage:	Keep container tightly closed in a dry, well-ventilated place.
Incompatible Products:	N/A

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Appropriate Engineering Controls: Adequate ventilation and access to eye washing stations are required.

Recommendations for Personal Protective Measures:

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 eyewear 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 a laboratory coat.

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Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be used.

Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product. Do not eat, drink or smoke when handling this product.

Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc:

N/A

Components with Workplace Control Parameters:

N/A

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:

Form: Liquid
Color: Colorless

Odor: No data available

Odor Threshold: No data available

pH: 7.0-9.0

Melting Point/Freezing Point: No data available

Initial Boiling Point/Boiling Range: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (Solid, Gas): No data available

Upper/Lower Limits on Flammability and Explosive Limits:

Flammability Limit (Upper): No data available

Flammability Limit (Lower): No data available

Explosive Limit (Upper): No data available

Explosive Limit (Lower): No data available

Vapor Pressure: No data available

Vapor Density: No data available

Relative Density: No data available.

Safety Data Sheet

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Solubility:

Solubility in Water: No data available

Solubility (Other): No data available

Partition Coefficient (n-octanol/
water): No data available

Auto-Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

SECTION 10. STABILITY AND REACTIVITY:

Reactivity: No dangerous reactions known under conditions of normal use.

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: N/A

Conditions to Avoid: N/A

Materials to Avoid: N/A

Hazardous Decomposition Products: N/A

SECTION 11. TOXICOLOGICAL INFORMATION:

Information on Likely Routes of Exposure:

Inhalation: No data available

Ingestion: No data available

Skin: No data available

Eyes: No data available

Information on Toxicological Effects:

Acute Toxicity:

Oral LD50: No data available

Inhalation LC50: No data available

Dermal LD50: No data available

Other Information: No data available

Skin Corrosion/Irritation: No data available

Serious Eye Damage/Irritation: No data available

Respiratory or Skin Sensitization: No data available

Safety Data Sheet

Trade Name: CSPL Buffer

Revision Date: 4/29/2016

Germ Cell Mutagenicity: No data available

Carcinogenicity:

IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No data available

Teratogenicity: No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposures: No data available

Aspiration Hazard: No data available

Signs and Symptoms of Exposure: No data available

Synergistic Effects: No data available

Additional Information: None known.

SECTION 12. ECOLOGICAL INFORMATION:

Toxicity: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

PBT and vPvB Assessment: No data available.

Other Adverse Effects: No data available.

Safety Data Sheet

Trade Name: CSPL Buffer

Revision Date: 4/29/2016

SECTION 13. DISPOSAL CONSIDERATIONS:

- 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.
- Contaminated Packaging:** Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION:

- DOT:** Not regulated.
- IMDG:** Not regulated.
- IATA:** Not regulated.

SECTION 15. REGULATORY INFORMATION:

US Federal Regulations:

- SARA 302 Components: None present or none present in regulated quantities.
- SARA 313 Components: None present or none present in regulated quantities.
- SARA 311/312 Hazards: No data available.

US State Regulations:

- California Prop. 65: No ingredient regulated by CA Prop 65 present.
- Massachusetts RTK: No ingredient regulated by MS Right to Know Act present.
- New Jersey & Community RTK: Water CAS No. 7732-18-5
- Pennsylvania RTK: Water CAS No. 7732-18-5
- Rhode Island RTK: No ingredient regulated by RI Right to Know Act present.

Safety Data Sheet

Trade Name: CSPL Buffer

Revision Date: 4/29/2016

SECTION 16. OTHER INFORMATION:

Issue Date: 9/10/2015

Revision Date: 4/29/2016

Version: 3.0

Further Information: No data available.

Disclaimer: 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 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.

Safety Data Sheet

Trade Name: DNA Wash Buffer

Revision Date: 4/29/2016

SECTION 1. IDENTIFICATION OF PRODUCT AND COMPANY:

Product Name: DNA Wash Buffer

Manufacturer or Supplier Details:

Company Name: Omega Bio-tek, Inc.
Address: 400 Pinnacle Way, Suite 450
Norcross, GA 30071
USA
Telephone: 1-800-832-8896
Email: info@omegabiotek.com
Emergency Telephone: CHEMTREC
USA & Canada: 1-800-424-9300
Outside USA & Canada: 1-703-527-3887

Recommended Use of the Chemical and Restrictions on Use:

Recommended Use: For research use only.

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification:

Health Hazards: No known OSHA hazards.
Not a dangerous substance according to GHS.

GHS Label Element:

Hazard Symbol: N/A

Hazard Statements: Not a hazardous substance or mixture.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Substance or Mixture: Mixture of non-hazardous substances.

Synonyms/Common Names: N/A

Safety Data Sheet

Trade Name: DNA Wash Buffer

Revision Date: 4/29/2016

SECTION 4. FIRST AID MEASURES:

General Advice:	Wear protective gloves/protective clothing/eye protection/face protection.
If Inhaled:	If not breathing, give artificial respiration.
In Case of Skin Contact:	Wash with soap and water.
In Case of Eye Contact:	Remove contact lenses, if present and easy to do. Continue rinsing.
If Swallowed:	N/A
Most Important Symptoms and Effects, Acute and Delayed:	N/A
Recommendations for Immediate Medical Attention and Special Treatment:	Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES:

Conditions of Flammability:	Not flammable or combustible.
Suitable Extinguishing Media:	Dry powder, CO ₂ , water spray or regular foam.
Special Protective Equipment for Firefighters:	Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products:	N/A
Further Information:	Prevent firefighting water from entering surface water or groundwater.

Safety Data Sheet

Trade Name: DNA Wash Buffer

Revision Date: 4/29/2016

SECTION 6. ACCIDENTAL RELEASE MEASURES:

Personal Precautions:	Avoid inhalation of vapors or mist. See Section 8: Exposure Controls/ Personal Protection for more information.
Environmental Precautions:	N/A
Emergency Procedures:	Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up:	Use inert absorbent material to soak up spill.

SECTION 7. HANDLING AND STORAGE:

Precautions for Safe Handling:	Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors or mist.
Conditions for Safe Storage:	Keep container tightly closed in a dry, well-ventilated place.
Incompatible Products:	N/A

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Appropriate Engineering Controls: Adequate ventilation and access to eye washing stations are required.

Recommendations for Personal Protective Measures:

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 eyewear 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 a laboratory coat.

Safety Data Sheet

Trade Name: DNA Wash Buffer

Revision Date: 4/29/2016

Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be used.
Hygiene Measures:	Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product. Do not eat, drink or smoke when handling this product.

Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc:

N/A

Components with Workplace Control Parameters:

N/A

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:

Form:	Liquid
Color:	Colorless

Odor: No data available

Odor Threshold: No data available

pH: 7.0-9.0

Melting Point/Freezing Point: No data available

Initial Boiling Point/Boiling Range: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (Solid, Gas): No data available

Upper/Lower Limits on Flammability and Explosive Limits:

Flammability Limit (Upper): No data available

Flammability Limit (Lower): No data available

Explosive Limit (Upper): No data available

Explosive Limit (Lower): No data available

Vapor Pressure: No data available

Vapor Density: No data available

Relative Density: No data available.

Safety Data Sheet

Trade Name: DNA Wash Buffer

Revision Date: 4/29/2016

Solubility:

Solubility in Water: No data available

Solubility (Other): No data available

Partition Coefficient (n-octanol/
water): No data available

Auto-Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

SECTION 10. STABILITY AND REACTIVITY:

Reactivity: No dangerous reactions known under conditions of normal use.

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: N/A

Conditions to Avoid: N/A

Materials to Avoid: N/A

Hazardous Decomposition Products: N/A

SECTION 11. TOXICOLOGICAL INFORMATION:

Information on Likely Routes of Exposure:

Inhalation: No data available

Ingestion: No data available

Skin: No data available

Eyes: No data available

Information on Toxicological Effects:

Acute Toxicity:

Oral LD50: No data available

Inhalation LC50: No data available

Dermal LD50: No data available

Other Information: No data available

Skin Corrosion/Irritation: No data available

Serious Eye Damage/Irritation: No data available

Respiratory or Skin Sensitization: No data available

Safety Data Sheet

Trade Name: DNA Wash Buffer

Revision Date: 4/29/2016

Germ Cell Mutagenicity: No data available

Carcinogenicity:

IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No data available

Teratogenicity: No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposures: No data available

Aspiration Hazard: No data available

Signs and Symptoms of Exposure: No data available

Synergistic Effects: No data available

Additional Information: None known.

SECTION 12. ECOLOGICAL INFORMATION:

Toxicity: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

PBT and vPvB Assessment: No data available.

Other Adverse Effects: No data available.

Safety Data Sheet

Trade Name: DNA Wash Buffer

Revision Date: 4/29/2016

SECTION 13. DISPOSAL CONSIDERATIONS:

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.

Contaminated Packaging: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION:

DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

SECTION 15. REGULATORY INFORMATION:

US Federal Regulations:

SARA 302 Components: None present or none present in regulated quantities.
SARA 313 Components: None present or none present in regulated quantities.
SARA 311/312 Hazards: No data available.

US State Regulations:

California Prop. 65: No ingredient regulated by CA Prop 65 present.
Massachusetts RTK: No ingredient regulated by MS Right to Know Act present.
New Jersey & Community RTK: Water CAS No. 7732-18-5
Pennsylvania RTK: Water CAS No. 7732-18-5
Rhode Island RTK: No ingredient regulated by RI Right to Know Act present.

Safety Data Sheet

Trade Name: DNA Wash Buffer

Revision Date: 4/29/2016

SECTION 16. OTHER INFORMATION:

Issue Date: 9/10/2015

Revision Date: 4/29/2016

Version: 3.0

Further Information: No data available.

Disclaimer: 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 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.

Safety Data Sheet

Trade Name: Elution Buffer

Revision Date: 4/29/2016

SECTION 1. IDENTIFICATION OF PRODUCT AND COMPANY:

Product Name: Elution Buffer

Manufacturer or Supplier Details:

Company Name: Omega Bio-tek, Inc.
Address: 400 Pinnacle Way, Suite 450
Norcross, GA 30071
USA
Telephone: 1-800-832-8896
Email: info@omegabiotek.com
Emergency Telephone: CHEMTREC
USA & Canada: 1-800-424-9300
Outside USA & Canada: 1-703-527-3887

Recommended Use of the Chemical and Restrictions on Use:

Recommended Use: For research use only.

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification:

Health Hazards: No known OSHA hazards.
Not a dangerous substance according to GHS.

GHS Label Element:

Hazard Symbol: N/A

Hazard Statements: Not a hazardous substance or mixture.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Substance or Mixture: Mixture of non-hazardous substances.

Synonyms/Common Names: N/A

Safety Data Sheet

Trade Name: Elution Buffer

Revision Date: 4/29/2016

SECTION 4. FIRST AID MEASURES:

General Advice:	Wear protective gloves/protective clothing/eye protection/face protection.
If Inhaled:	If not breathing, give artificial respiration.
In Case of Skin Contact:	Wash with soap and water.
In Case of Eye Contact:	Remove contact lenses, if present and easy to do. Continue rinsing.
If Swallowed:	N/A
Most Important Symptoms and Effects, Acute and Delayed:	N/A
Recommendations for Immediate Medical Attention and Special Treatment:	Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES:

Conditions of Flammability:	Not flammable or combustible.
Suitable Extinguishing Media:	Dry powder, CO ₂ , water spray or regular foam.
Special Protective Equipment for Firefighters:	Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products:	N/A
Further Information:	Prevent firefighting water from entering surface water or groundwater.

Safety Data Sheet

Trade Name: Elution Buffer

Revision Date: 4/29/2016

SECTION 6. ACCIDENTAL RELEASE MEASURES:

Personal Precautions:	Avoid inhalation of vapors or mist. See Section 8: Exposure Controls/ Personal Protection for more information.
Environmental Precautions:	N/A
Emergency Procedures:	Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up:	Use inert absorbent material to soak up spill.

SECTION 7. HANDLING AND STORAGE:

Precautions for Safe Handling:	Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors or mist.
Conditions for Safe Storage:	Keep container tightly closed in a dry, well-ventilated place.
Incompatible Products:	N/A

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Appropriate Engineering Controls: Adequate ventilation and access to eye washing stations are required.

Recommendations for Personal Protective Measures:

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 eyewear 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 a laboratory coat.

Safety Data Sheet

Trade Name: Elution Buffer

Revision Date: 4/29/2016

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be used.

Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product. Do not eat, drink or smoke when handling this product.

Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc:

N/A

Components with Workplace Control Parameters:

N/A

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:

Form: Liquid
Color: Colorless

Odor: No data available

Odor Threshold: No data available

pH: 8.0-9.0

Melting Point/Freezing Point: No data available

Initial Boiling Point/Boiling Range: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (Solid, Gas): No data available

Upper/Lower Limits on Flammability and Explosive Limits:

Flammability Limit (Upper): No data available

Flammability Limit (Lower): No data available

Explosive Limit (Upper): No data available

Explosive Limit (Lower): No data available

Vapor Pressure: No data available

Vapor Density: No data available

Relative Density: No data available.

Safety Data Sheet

Trade Name: Elution Buffer

Revision Date: 4/29/2016

Solubility:

Solubility in Water: No data available

Solubility (Other): No data available

Partition Coefficient (n-octanol/
water): No data available

Auto-Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

SECTION 10. STABILITY AND REACTIVITY:

Reactivity: No dangerous reactions known under conditions of normal use.

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: N/A

Conditions to Avoid: N/A

Materials to Avoid: N/A

Hazardous Decomposition Products: N/A

SECTION 11. TOXICOLOGICAL INFORMATION:

Information on Likely Routes of Exposure:

Inhalation: No data available

Ingestion: No data available

Skin: No data available

Eyes: No data available

Information on Toxicological Effects:

Acute Toxicity:

Oral LD50: No data available

Inhalation LC50: No data available

Dermal LD50: No data available

Other Information: No data available

Skin Corrosion/Irritation: No data available

Serious Eye Damage/Irritation: No data available

Respiratory or Skin Sensitization: No data available

Safety Data Sheet

Trade Name: Elution Buffer

Revision Date: 4/29/2016

Germ Cell Mutagenicity: No data available

Carcinogenicity:

IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No data available

Teratogenicity: No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposures: No data available

Aspiration Hazard: No data available

Signs and Symptoms of Exposure: No data available

Synergistic Effects: No data available

Additional Information: None known.

SECTION 12. ECOLOGICAL INFORMATION:

Toxicity: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

PBT and vPvB Assessment: No data available.

Other Adverse Effects: No data available.

Safety Data Sheet

Trade Name: Elution Buffer

Revision Date: 4/29/2016

SECTION 13. DISPOSAL CONSIDERATIONS:

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.

Contaminated Packaging: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION:

DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

SECTION 15. REGULATORY INFORMATION:

US Federal Regulations:

SARA 302 Components: None present or none present in regulated quantities.
SARA 313 Components: None present or none present in regulated quantities.
SARA 311/312 Hazards: No data available.

US State Regulations:

California Prop. 65: No ingredient regulated by CA Prop 65 present.
Massachusetts RTK: No ingredient regulated by MS Right to Know Act present.
New Jersey & Community RTK: Water CAS No. 7732-18-5
Pennsylvania RTK: Water CAS No. 7732-18-5
Rhode Island RTK: No ingredient regulated by RI Right to Know Act present.

Safety Data Sheet

Trade Name: Elution Buffer

Revision Date: 4/29/2016

SECTION 16. OTHER INFORMATION:

Issue Date: 9/10/2015

Revision Date: 4/29/2016

Version: 3.0

Further Information: No data available.

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Safety Data Sheet

Trade Name: Proteinase K Solution

Revision Date: 5/19/2016

SECTION 1. IDENTIFICATION OF PRODUCT AND COMPANY:

Product Name: Proteinase K Solution

Manufacturer or Supplier Details:

Company Name: Omega Bio-tek, Inc.
Address: 400 Pinnacle Way, Suite 450
Norcross, GA 30071
USA
Telephone: 1-800-832-8896
Email: info@omegabiotek.com
Emergency Telephone: CHEMTREC
USA & Canada: 1-800-424-9300
Outside USA & Canada: 1-703-527-3887

Recommended Use of the Chemical and Restrictions on Use:

Recommended Use: For research use only.

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification:

OSHA Hazards: Respiratory sensitizer, irritant.
Health Hazards: Skin irritation Category 3
Respiratory sensitization Category 1

GHS Label Element:

Hazard Symbol:



Signal Word: Danger
Hazard Statements: H316 - Causes mild skin irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Precautionary Statements: P261 - Avoid breathing dust/fumes/gas/mist/vapors/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - In case of inadequate ventilation, wear respiratory protection.

Safety Data Sheet

Trade Name: Proteinase K Solution

Revision Date: 5/19/2016

Precautionary Statements: P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332 + P 313 - If skin irritation occurs: Get medical advice/attention.
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Potential Health Effects:

Aggravated Medical Conditions:

Symptoms of Overexposure:

Inhalation: May cause sensitization by inhalation.

Skin: May cause mild skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Carcinogenicity:

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

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

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

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

SECTION 3. COMPOSITION OF/INFORMATION ON INGREDIENTS:

Substance or Mixture: Mixture of the substances listed below with non-hazardous additions.

Synonyms/Common Names: Endopeptidase K

Chemical Name	CAS No.	Concentration (%)
Proteinase K	39450-01-6	1-5%
Glycerol	56-81-5	30-60%

Safety Data Sheet

Trade Name: Proteinase K Solution

Revision Date: 5/19/2016

SECTION 4. FIRST AID MEASURES:

General Advice:	Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.
If Inhaled:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In Case of Skin Contact:	Wash off with soap and plenty of water. Consult a physician.
In Case of Eye Contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If Swallowed:	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Most Important Symptoms and Effects, Acute and Delayed:	
Recommendations for Immediate Medical Attention and Special Treatment:	Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES:

Conditions of Flammability:	Not flammable or combustible.
Suitable Extinguishing Media:	Dry powder, CO ₂ , water spray or alcohol-resistant foam.
Special Protective Equipment for Firefighters:	Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products:	N/A
Further Information:	

Safety Data Sheet

Trade Name: Proteinase K Solution

Revision Date: 5/19/2016

SECTION 6. ACCIDENTAL RELEASE MEASURES:

Personal Precautions:	Use personal protective equipment. Avoid aerosolization. Avoid breathing vapors or mist. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental Precautions:	Do not let product enter drains.
Emergency Procedures:	Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up:	Absorb on sand or vermiculite and place in closed containers for disposal. Pick up and transfer to properly labeled containers. Ensure proper ventilation and cleaning of spill site.

SECTION 7. HANDLING AND STORAGE:

Precautions for Safe Handling:	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Conditions for Safe Storage:	Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 2-8°C.
Incompatible Products:	

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Appropriate Engineering Controls: Adequate ventilation and access to eye washing stations are required.

Recommendations for Personal Protective Measures:

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 eyewear 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 a laboratory coat.

Safety Data Sheet

Trade Name: Proteinase K Solution

Revision Date: 5/19/2016

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an accepted level (in countries where exposure limits have not been established), an approved respirator must be used.

Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product. Do not eat, drink or smoke when handling this product.

Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc:

Components with Workplace Control Parameters:

Components	CAS No.	Value	Control Parameters	Basis
Glycerol	56-81-5	PEL (Total dust)	15 mg/m ³	USA. OSHA Table Z-1 Limits for Air Contaminants
		PEL (Respirable fraction)	5 mg/m ³	USA. OSHA Table Z-1 Limits for Air Contaminants
		TWA	5 mg/m ³	USA. Cal/OSHA Table Z-1 Limits for Air Contaminants

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:

Form: Liquid
Color: Slightly yellow

Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting Point/Freezing Point: No data available

Initial Boiling Point/Boiling Range: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (Solid, gas): No data available

Safety Data Sheet

Trade Name: Proteinase K Solution

Revision Date: 5/19/2016

Upper/Lower Limits on Flammability and Explosive Limits:

Flammability Limit (Upper): No data available

Flammability Limit (Lower): No data available

Explosive Limit (Upper): No data available

Explosive Limit (Lower): No data available

Vapor Pressure: No data available

Vapor Density: No data available

Relative Density: No data available

Solubility:

Solubility in Water: No data available

Solubility (Other): No data available

Partition Coefficient (n-octanol/water): No data available

Auto-Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

SECTION 10. STABILITY AND REACTIVITY:

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: N/A

Conditions to Avoid: N/A

Materials to Avoid: N/A

Hazardous Decomposition Products: N/A

SECTION 11. TOXICOLOGICAL INFORMATION:

Information on Likely Routes of Exposure:

Inhalation: May cause sensitization by inhalation.

Skin: May cause mild skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Safety Data Sheet

Trade Name: Proteinase K Solution

Revision Date: 5/19/2016

Information on Toxicological Effects:

	Proteinase K	Glycerol
Acute Toxicity:		
Oral LD50:	No data available	12,600 mg/kg (rat)
Inhalation LC50:	No data available	> 570 mg/m ³ (rat)
Dermal LD50:	No data available	> 10,000 mg/kg (rabbit)
Other Information:	No data available	
Skin Corrosion/Irritation:	No data available	Mild skin irritation, 24 hrs (rabbit)
Serious Eye Damage/Irritation:	No data available	Mild eye irritation, 24 hrs (rabbit)
Respiratory or Skin Sensitization:	No data available	
Germ Cell Mutagenicity:	No data available	

Carcinogenicity:

IARC:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
NTP:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity:	No data available
Teratogenicity:	No data available
Specific Target Organ Toxicity - Single Exposure:	No data available
Specific Target Organ Toxicity - Repeated Exposures:	No data available
Aspiration Hazard:	No data available
Signs and Symptoms of Exposure:	
Synergistic Effects:	No data available
Additional Information:	No data available

SECTION 12. ECOLOGICAL INFORMATION:

Toxicity:	No data available.
Toxicity to Fish LC50:	> 5,000 mg/L Carassius Auratus (goldfish) 44,000 mg/L Pimephales Promelas (fathead minnow) 67,500 mg/L Oncorhynchus Mykiss (rainbow trout) > 100,100 mg/L Other fish

Safety Data Sheet

Trade Name: Proteinase K Solution

Revision Date: 5/19/2016

Persistence and Degradability:	No data available.
Bioaccumulative Potential:	No data available.
Mobility in Soil:	Product is water soluble and may spread in water systems.
PBT and vPvB Assessment:	No data available.
Other Adverse Effects:	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13. DISPOSAL CONSIDERATIONS:

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.
Contaminated Packaging:	Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION:

DOT:	Not considered dangerous goods.
IMDG:	Not considered dangerous goods.
IATA:	Not considered dangerous goods.

SECTION 15. REGULATORY INFORMATION:

US Federal Regulations:

OSHA Hazards:	Respiratory sensitizer, irritant.
SARA 302 Components:	None present or none present in regulated quantities.
SARA 313 Components:	None present or none present in regulated quantities.
SARA 311/312 Hazards:	Chronic health hazard

US State Regulations:

California Prop. 65:	No ingredient regulated by CA Prop 65 present.
Massachusetts RTK:	Glycerol 56-81-5

Safety Data Sheet

Trade Name: Proteinase K Solution

Revision Date: 5/19/2016

Pennsylvania RTK:	Water	7732-18-5
	Glycerol	56-81-5
Rhode Island RTK:	Water	7732-18-5
	Glycerol	56-81-5

SECTION 16. OTHER INFORMATION:

Issue Date: 9/8/2014

Revision Date: 5/19/2016

Version: 3.0

Further Information: No data available.

Disclaimer: 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 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.

Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 7/15/2016

SECTION 1. IDENTIFICATION OF PRODUCT AND COMPANY:

Product Name: RBB Buffer

Manufacturer or Supplier Details:

Company Name: Omega Bio-tek, Inc.
Address: 400 Pinnacle Way, Suite 450
Norcross, GA 30071
USA
Telephone: 1-800-832-8896
Email: info@omegabiotek.com
Emergency Telephone: CHEMTREC
USA & Canada: 1-800-424-9300
Outside USA & Canada: 1-703-527-3887

Recommended Use of the Chemical and Restrictions on Use:

Recommended Use: For research use only.

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification:

OSHA Hazards: Harmful by inhalation, harmful by ingestion, harmful in contact with skin.

Health Hazards:	Acute toxicity, inhalation	Category 4
	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Acute aquatic toxicity	Category 3
	Chronic acute toxicity	Category 3
	Flammable liquids	Category 2

GHS Label Element:

Hazard Symbol:



Signal Word:

Warning

Hazard Statements:

H412 - Harmful to aquatic life with long-lasting effects.
H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H332 - Harmful if inhaled.
H226 - Flammable liquid and vapour.

Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 7/15/2016

Precautionary Statements:

P261 - Avoid breathing dust/fumes/gas/mist/vapors/spray.
P311 - Call a POISON CENTER or doctor/physician.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician.
P304 + P340 - IF INHALED: Remove person to fresh air and keep in a position comfortable for breathing.
P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 - Keep container tightly closed.

Potential Health Effects:

Aggravated Medical Conditions: May cause nervous system disturbances.
Symptoms of Overexposure:
Inhalation: Harmful 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.

Carcinogenicity:

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

SECTION 3. COMPOSITION OF/INFORMATION ON INGREDIENTS

Substance or Mixture: Mixture of the substances listed below with non-hazardous additions.

Synonyms/Common Names: Guanidinium thiocyanate, Guanidinium rhodanide, Guanidinium isothiocyanate, Guanidine isothiocyanate
Ethyl alcohol

Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 7/15/2016

Chemical Name	CAS No.	Concentration (%)
Guanidine thiocyanate $\text{CH}_5\text{N}_3 \cdot \text{CHNS}$	593-84-0	25-50%
Chemical Name	CAS No.	Concentration (%)
Ethanol $\text{C}_2\text{H}_6\text{O}$	64-17-5	10-20%

SECTION 4. FIRST AID MEASURES

General Advice:	Exit to a safe area. Consult a physician. Seek medical attention.
If Inhaled:	Move to fresh air. If not breathing, give artificial respiration. Seek medical attention.
In Case of Skin Contact:	Exit to safe area. Remove contaminated clothing. Wash thoroughly with soap and water. Seek medical attention.
In Case of Eye Contact:	Flush eyes with clean water for a minimum of 15 minutes keeping eyes open. Seek medical attention.
If Swallowed:	Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention.
Most Important Symptoms and Effects, Acute and Delayed:	May cause pain, irritation or redness, and watering of eyes.
Recommendations for Immediate Medical Attention and Special Treatment:	

SECTION 5. FIREFIGHTING MEASURES

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 flames and/or hot surfaces. No smoking.
Suitable Extinguishing Media:	Dry powder, CO_2 , water spray or alcohol-resistant foam.

Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 7/15/2016

Special Protective Equipment for Firefighters:	Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products:	Carbon oxides (CO, CO ₂), sulfur oxides (SO _x), nitrogen oxides (NO _x)
Further Information:	Prevent firefighting water from entering surface water or groundwater.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear respiratory protection when ventilation is inadequate. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep away from heat and sources of ignition. See Section 8: Exposure Controls/Personal Protection for more details.
Environmental Precautions:	Prevent further leakage if area is safe. Do not let product enter drains. Avoid discharge into the environment.
Emergency Procedures:	Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up:	Use inert absorbent material to soak up spill. Dispose of hazardous waste. Do not flush with water.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling:	Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with skin and eyes. Avoid inhalation of vapors or mist.
Conditions for Safe Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light and moisture. Do not store near acids. Keep away from heat and sources of ignition.
Incompatible Products:	Strong oxidizing agents, strong acids

Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 7/15/2016

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate Engineering Controls: Adequate ventilation and access to eye washing stations are required.

Recommendations for Personal Protective Measures:

- 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 eyewear 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 a laboratory coat.
- Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be used.
- Hygiene Measures:** Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product. Do not eat, drink or smoke when handling this product.

Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc.

N/A

Components with Workplace Control Parameters:

Components	CAS No.	Value	Control Parameters	Basis
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m ³	OSHA PEL
		STEL	1,100 ppm	OSHA PEL

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form: Liquid

Color: Colorless

Odor: Alcohol-like

Odor Threshold: No data available

pH: 5.0-7.0

Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 7/15/2016

Melting Point/Freezing Point:	No data available
Initial Boiling Point/Boiling Range:	No data available
Flash Point:	95° F (35° C)
Evaporation Rate:	No data available
Flammability (Solid, Gas):	No data available
Upper/Lower Limits on Flammability and Explosive Limits:	
Flammability Limit (Upper):	No data available
Flammability Limit (Lower):	No data available
Explosive Limit (Upper):	No data available
Explosive Limit (Lower):	No data available
Vapor Pressure:	No data available
Vapor Density:	No data available
Relative Density:	No data available
Solubility:	
Solubility in Water:	No data available
Solubility (Other):	No data available

SECTION 10. STABILITY AND REACTIVITY:

Reactivity:	Vapor/air - Mixtures are flammable.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of Hazardous Reactions:	Risk of ignition or formation of inflammable gases or vapors with: chromium (VI) oxide, hydrogen peroxide, uranium hexafluoride, nitrogen dioxide, nitric acid, oxides of phosphorous, permanganic acid, perchloric acid, sulfuric acid, potassium permanganate, perchlorates, fluorine, ethylene oxide, chromyl chloride, halogen-halogen compounds, strong oxidizing agents, alkali oxides, alkaline earth metals, alkali metals
Conditions to Avoid:	Heating, flames, sparks, extremes of temperature and direct sunlight
Materials to Avoid:	Oxidizing agents, acid anhydrides, aluminum, halogenated compounds, acids
Hazardous Decomposition Products:	In the event of fire: see Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION:

Information on Likely Routes of Exposure:

Inhalation:	May be harmful if inhaled. May cause drowsiness or dizziness.
Ingestion:	May be harmful if swallowed.

Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 7/15/2016

Skin: May be harmful if absorbed through skin. Causes skin burns.
Eyes: Causes severe eye burns.

Information on Toxicological Effects:

Acute Toxicity:	GTC	EtOH
Oral LD50:	593 mg/kg (Rat)	6,200 mg/kg (Rat)
Inhalation LC50:	No data available	95.6 mg/L, 4h (Rat)
Dermal LD50:	No data available	No data available
Other Information:	Peritoneal LD50: 300 mg/kg (Mouse)	
Skin Corrosion/Irritation:	No data available	
Serious Eye Damage/Irritation:	No data available	
Respiratory or Skin Sensitization:	Components of this product may be absorbed into the body through the skin. Irritating to skin and mucus membranes.	
Germ Cell Mutagenicity:	No data available	

Carcinogenicity:

IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No data available

Teratogenicity: No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposures: No data available

Aspiration Hazard: No data available

Signs and Symptoms of Exposure: Irritating to eyes, respiratory system and skin.

Synergistic Effects: No data available

Additional Information: No data available

Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 7/15/2016

SECTION 12. TOXICOLOGICAL INFORMATION:

Toxicity:	GTC EC50: 42.4 mg/L - 48h (<i>Daphnia</i>)	EtOH 9,268-14,221 mg/L - 48h (<i>Daphnia</i>)
Persistence and Degradability:	No data available	
Bioaccumulative Potential:	No data available	
Mobility in Soil:	Product is water soluble and may spread in water systems.	
PBT and vPvB Assessment:	No data available	
Other Adverse Effects:	Harmful to aquatic life with long-lasting effects.	

SECTION 13. DISPOSAL CONSIDERATIONS:

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.
Contaminated Packaging:	Disposal must be made according to official regulations. To minimize exposure, please refer to Section 8: Exposure Control/Personal Protection of this SDS.

SECTION 14. TRANSPORT INFORMATION:

DOT:	Not considered dangerous goods.
IMDG:	Not considered dangerous goods.
IATA:	Not considered dangerous goods.

SECTION 15. REGULATORY INFORMATION:

US Federal Regulations:	
OSHA Hazards:	Harmful by inhalation, harmful by ingestion, harmful in contact with skin.
Aggravated Medical Conditions:	May cause nervous system disturbances.
Symptoms of Overexposure:	

Safety Data Sheet

Trade Name: RBB Buffer

Revision Date: 7/15/2016

Inhalation:	Harmful if inhaled. May cause respiratory irritation.
Skin:	Harmful if absorbed through skin. May cause skin irritation.
Eyes:	May cause eye irritation.
Ingestion:	Harmful if swallowed.
SARA 302 Components:	None present or none present in regulated quantities.
SARA 313 Components:	None present or none present in regulated quantities.
SARA 311/312 Hazards:	Acute health hazard

US State Regulations:

California Prop. 65:	No ingredient regulated by CA Prop 65 present.	
New Jersey & Community RTK:	Component(s)	CAS-No.
	Ethanol	64-17-5
Massachusetts RTK:	Ethanol	64-17-5
Pennsylvania RTK:	Ethanol	64-17-5
Rhode Island RTK:	Ethanol	64-17-5

SECTION 16. OTHER INFORMATION:

Issue Date:	8/29/2015
Revision Date:	7/15/2016
Version:	2.0
Further Information:	No data available.
Disclaimer:	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 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.

Safety Data Sheet

Trade Name: RNase A

Revision Date: 12/30/2016

SECTION 1. IDENTIFICATION OF PRODUCT AND COMPANY:

Product Name:

Manufacturer or Supplier Details:

Company Name: Omega Bio-tek, Inc.
Address: 400 Pinnacle Way, Suite 450
Norcross, GA 30071
USA

Telephone: 1-800-832-8896
Email: info@omegabiotek.com
Emergency Telephone: CHEMTREC
USA & Canada: 1-800-424-9300
Outside USA & Canada: 1-703-527-3887

Recommended Use of the Chemical and Restrictions on Use:

Recommended Use: For research use only.

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification:

Health Hazards: Respiratory sensitizer Category 1

GHS Label Element:



Hazard Statements:

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements:

P261 - Avoid breathing dust/fumes/gas/mist/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - In case of inadequate ventilation, wear respiratory protection.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P332 + P313 - IF SKIN IRRITATION OCCURS: Get medical advice/attention.
P342 + P311 - IF EXPERIENCING RESPIRATORY SYMPTOMS: Call a POISON CENTER or doctor/physician.

Safety Data Sheet

Trade Name: RNase A

Revision Date: 12/30/2016

SECTION 3. COMPOSITION OF/INFORMATION ON INGREDIENTS:

Substance or Mixture: Mixture of the substances listed below with non-hazardous additions.

Synonyms/Common Names: Ribonuclease A, ribonuclease I, ribonuclease 3' pyrimidinooligonucleotide hydrolase, pancreatic ribonuclease

Chemical Name	CAS No.	Concentration (%)
Glycerol	56-81-5	30-60%
RNase	9001-99-4	1-3%

SECTION 4. FIRST AID MEASURES:

General Advice: Exit to a safe area. Consult a physician.

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

In Case of Skin Contact: Wash off with soap and plenty of water. Consult a physician.

In Case of Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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

Most Important Symptoms and Effects, Acute and Delayed: N/A

Recommendations for Immediate Medical Attention and Special Treatment: Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES:

Conditions of Flammability: Not flammable or combustible.

Suitable Extinguishing Media: Dry powder, CO₂, water spray or alcohol-resistant foam.

Safety Data Sheet

Trade Name: RNase A

Revision Date: 12/30/2016

Special Protective Equipment for Firefighters:	Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products:	Carbon oxides, nitrogen oxides
Further Information:	Prevent firefighting water from entering surface water or groundwater.

SECTION 6. ACCIDENTAL RELEASE MEASURES:

Personal Precautions:	Use personal protective equipment. Avoid breathing vapors or mist. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. See Section 8: Exposure Controls/Personal Protection for more information.
Environmental Precautions:	Do not let product enter drains.
Emergency Procedures:	Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up:	Use inert material to soak up spill. Keep waste in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE:

Precautions for Safe Handling:	Handle in accordance with good chemical hygiene and safety practices. Avoid inhalation of vapor or mist.
Conditions for Safe Storage:	Store at 2-8°C. Keep containers tightly closed.
Incompatible Products:	Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Appropriate Engineering Controls:	Adequate ventilation and access to eye washing stations are required.
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Safety Data Sheet

Trade Name: RNase A

Revision Date: 12/30/2016

Recommendations for Personal Protective Measures:

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 eyewear 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 a laboratory coat.
Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be used.
Hygiene Measures:	Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product. Do not eat, drink or smoke when handling this product.

Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc:

N/A

Components with Workplace Control Parameters:

Components	CAS No.	Value	Control Parameters	Basis
Glycerol	56-81-5	PEL	15 mg/m ³	USA. OSHA Table Z-1 Limits for Air Contaminants
		PEL	5 mg/m ³	USA. OSHA Table Z-1 Limits for Air Contaminants
		TWA	10 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:

Form:	Liquid
Color:	Colorless

Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting Point/Freezing Point: No data available

Initial Boiling Point/Boiling Range: No data available

Flash Point: No data available

Safety Data Sheet

Trade Name: RNase A

Revision Date: 12/30/2016

Evaporation Rate:	No data available
Flammability (Solid, Gas):	No data available
Upper/Lower Limits on Flammability and Explosive Limits:	
Flammability Limit (Upper):	No data available
Flammability Limit (Lower):	No data available
Vapor Pressure:	No data available
Vapor Density:	No data available
Relative Density:	No data available
Solubility:	
Solubility in Water:	No data available
Solubility (Other):	No data available
Partition Coefficient (n-octanol/ water):	No data available
Auto-Ignition Temperature:	No data available
Decomposition Temperature:	No data available
Viscosity:	No data available

SECTION 10. STABILITY AND REACTIVITY:

Reactivity:	No dangerous reaction known under conditions of normal use
Chemical Stability:	Stable under recommended storage conditions
Possibility of Hazardous Reactions:	None under normal processing
Conditions to Avoid:	Extreme temperatures and direct sunlight
Materials to Avoid:	Strong oxidizing agents
Hazardous Decomposition Products:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION:

Information on Toxicological Effects:

	RNase A	Glycerol
Acute Toxicity:		
Oral LD50:	No data available	12,600 mg/kg (rat)
Inhalation LC50:	No data available	No data available
Dermal LD50:	No data available	> 10,000 mg/kg (rabbit)
Other Information:	No data available	No data available
Skin Corrosion/Irritation:	No data available	Mild skin irritation, 24 hrs (rabbit)
Serious Eye Damage/Irritation:	No data available	Mild eye irritation, 24 hrs (rabbit)

Safety Data Sheet

Trade Name: RNase A

Revision Date: 12/30/2016

Respiratory or Skin Sensitization: No data available

Germ Cell Mutagenicity: No data available

Carcinogenicity:

IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No data available

Teratogenicity: No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposures: No data available

Aspiration Hazard: No data available

Signs and Symptoms of Exposure: Prolonged or repeated exposure may cause headache, nausea, vomiting.

Synergistic Effects: No data available

Additional Information: Kidney: Irregularities - Based on human evidence (Glycerol)

SECTION 12. ECOLOGICAL INFORMATION:

Toxicity: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

PBT and vPvB Assessment: No data available.

Other Adverse Effects: No data available.

Safety Data Sheet

Trade Name: RNase A

Revision Date: 12/30/2016

SECTION 13. DISPOSAL CONSIDERATIONS:

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.
Contaminated Packaging:	Disposal must be made according to official regulations. To minimize exposure, please refer to Section 8: Exposure Control/Personal Protection of this SDS.

SECTION 14. TRANSPORT INFORMATION:

DOT:	Not considered dangerous goods.
IMDG:	Not considered dangerous goods.
IATA:	Not considered dangerous goods.

SECTION 15. REGULATORY INFORMATION:

US Federal Regulations:

SARA 302 Components:	None present or none present in regulated quantities.
SARA 313 Components:	None present or none present in regulated quantities.
SARA 311/312 Hazards:	Acute health hazard

US State Regulations:

California Prop. 65:	No ingredient regulated by CA Prop 65 present.
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Safety Data Sheet

Trade Name: RNase A

Revision Date: 12/30/2016

SECTION 16. OTHER INFORMATION:

Issue Date: 9/9/2014

Revision Date: 12/30/2016

Version: 2.5

Further Information: No data available.

Disclaimer: 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 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.

Safety Data Sheet

Trade Name: VHB Buffer

Revision Date: 4/28/2016

SECTION 1. IDENTIFICATION OF PRODUCT AND COMPANY:

Product Name: VHB Buffer

Manufacturer or Supplier Details:

Company Name: Omega Bio-tek, Inc.
Address: 400 Pinnacle Way, Suite 450
Norcross, GA 30071
USA
Telephone: 1-800-832-8896
Email: info@omegabiotek.com
Emergency Telephone: CHEMTREC
USA & Canada: 1-800-424-9300
Outside USA & Canada: 1-703-527-3887

Recommended Use of the Chemical and Restrictions on Use:

Recommended Use: For research use only.

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification:

Health Hazards:	Acute toxicity (oral) Skin corrosion/irritation Serious eye damage/eye irritation Specific target organ toxicity - single exposure	Category 4 Category 2 Category 2A Category 3
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GHS Label Element:

Hazard Symbol:



Signal Word:

Warning

Hazard Statements:

H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious skin irritation.
H332 - Harmful if inhaled.

Safety Data Sheet

Trade Name: VHB Buffer

Revision Date: 4/28/2016

Precautionary Statements:

P261 - Avoid breathing dust/fumes/gas/mist/vapors/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.
P311 - Call a poison control center or doctor/physician.

Potential Health Effects:

Aggravated Medical Conditions: May cause nervous system disturbances.
Symptoms of Overexposure:
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.

Carcinogenicity:

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Substance or Mixture: Mixture of the substances listed below with non-hazardous additions.

Synonyms/Common Names: Guanidinium chloride, Guanidinium monohydrochloride, Guanidinium hydrochloride

Chemical Name	CAS No.	Concentration (%)
Guanidine Hydrochloride CH_6ClN_3	50-01-1	50-100%

Safety Data Sheet

Trade Name: VHB Buffer

Revision Date: 4/28/2016

SECTION 4. FIRST AID MEASURES:

General Advice:	Exit to a safe area. Consult a physician. Seek medical attention.
If Inhaled:	Move to fresh air. If not breathing, give artificial respiration. Seek medical attention.
In Case of Skin Contact:	Exit to safe area. Wash thoroughly with soap and water. Seek medical attention.
In Case of Eye Contact:	Flush eyes with clean water for a minimum of 15 minutes, keeping eyes open. Seek medical attention.
If Swallowed:	Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention.
Most Important Symptoms and Effects, Acute and Delayed:	Irritating to eyes, respiratory system and skin. Narcotic effect.
Recommendations for Immediate Medical Attention and Special Treatment:	Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES:

Conditions of Flammability:	Not flammable or combustible.
Suitable Extinguishing Media:	Dry powder, CO ₂ , water spray or regular foam.
Special Protective Equipment for Firefighters:	Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products:	Carbon oxides (CO, CO ₂), nitrogen oxides (NO _x), hydrogen chloride gas
Further Information:	Prevent firefighting water from entering surface water or groundwater.

Safety Data Sheet

Trade Name: VHB Buffer

Revision Date: 4/28/2016

SECTION 6. ACCIDENTAL RELEASE MEASURES:

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 more details.
Environmental Precautions:	Prevent further leakage if area is safe. Do not let product enter drains. Avoid discharge into the environment.
Emergency Procedures:	Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up:	Use inert absorbent material to soak up spill. Dispose of hazardous waste. Do not flush with water.

SECTION 7. HANDLING AND STORAGE:

Precautions for Safe Handling:	Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors or mist.
Conditions for Safe Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture.
Incompatible Products:	Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Appropriate Engineering Controls: Adequate ventilation and access to eye washing stations are required.

Recommendations for Personal Protective Measures:

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 eyewear 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 a laboratory coat.

Safety Data Sheet

Trade Name: VHB Buffer

Revision Date: 4/28/2016

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be used.

Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product. Do not eat, drink or smoke when handling this product.

Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc:

Components with Workplace Control Parameters:

Components	CAS No.	Value	Control Parameters	Basis
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance:
Form: Liquid
Color: Colorless

Odor: No data available

Odor Threshold: No data available

pH: 3.0-5.0

Melting Point/Freezing Point: No data available

Initial Boiling Point/Boiling Range: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (Solid, Gas): No data available

Upper/Lower Limits on Flammability and Explosive Limits:
Flammability Limit (Upper): No data available
Flammability Limit (Lower): No data available
Explosive Limit (Upper): No data available
Explosive Limit (Lower): No data available

Vapor Pressure: No data available

Vapor Density: No data available

Safety Data Sheet

Trade Name: VHB Buffer

Revision Date: 4/28/2016

Relative Density:	No data available
Solubility:	
Solubility in Water:	No data available
Solubility (Other):	No data available
Partition Coefficient (n-octanol/water):	No data available
Auto-Ignition Temperature:	No data available
Decomposition Temperature:	No data available
Viscosity:	No data available

SECTION 10. STABILITY AND REACTIVITY:

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	Contact with incompatible materials, excessive heat.
Materials to Avoid:	Strong oxidizing agents, strong acids, inorganic salts, chlorinated compounds
Hazardous Decomposition Products:	Carbon oxides, nitrogen oxides (NOx), hydrogen chloride gas

SECTION 11. TOXICOLOGICAL INFORMATION:

Information on Likely Routes of Exposure:

Inhalation:	Harmful if inhaled. May cause respiratory tract irritation.
Ingestion:	Harmful if swallowed.
Skin:	Causes skin irritation.
Eyes:	Causes serious eye irritation.

Information on Toxicological Effects:

Acute Toxicity:	
Oral LD50:	1,900 mg/kg (Rat)
Inhalation LC50:	No data available
Dermal LD50:	2,000 mg/kg (Rabbit)
Other Information:	No data available

Safety Data Sheet

Trade Name: VHB Buffer

Revision Date: 4/28/2016

Skin Corrosion/Irritation:	Causes skin irritation.
Serious Eye Damage/Irritation:	Causes serious eye irritation.
Respiratory or Skin Sensitization:	Components of this product may be absorbed into the body through the skin. Irritating to skin and mucus membranes.
Germ Cell Mutagenicity:	No mutagenic components identified.

Carcinogenicity:

IARC:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
NTP:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No component toxic to reproduction.

Teratogenicity: No data available.

Specific Target Organ Toxicity - Single Exposure: Respiratory tract irritation.

Specific Target Organ Toxicity - Repeated Exposures: No data available.

Aspiration Hazard: No data available.

Signs and Symptoms of Exposure: Irritating to eyes, respiratory system and skin. Narcotic effect.

Synergistic Effects: No data available.

Additional Information: None known.

SECTION 12. ECOLOGICAL INFORMATION:

Toxicity: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: Product is water soluble and may spread in water systems.

PBT and vPvB Assessment: No data available.

Other Adverse Effects: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Safety Data Sheet

Trade Name: VHB Buffer

Revision Date: 4/28/2016

SECTION 13. DISPOSAL CONSIDERATIONS:

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.
Contaminated Packaging:	Disposal must be made according to official regulations. To minimize exposure, please refer to Section 8: Exposure Control/Personal Protection of this SDS.

SECTION 14. TRANSPORT INFORMATION:

DOT:	Not regulated.
IMDG:	Not regulated.
IATA:	Not regulated.

SECTION 15. REGULATORY INFORMATION:

US Federal Regulations:

OSHA Hazards:	
Aggravated Medical Conditions:	May cause nervous system disturbances.
Symptoms of Overexposure:	
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.
SARA 302 Components:	None present or none present in regulated quantities.
SARA 313 Components:	None present or none present in regulated quantities.
SARA 311/312 Hazards:	Acute health hazard, chronic health hazard

Safety Data Sheet

Trade Name: VHB Buffer

Revision Date: 4/28/2016

US State Regulations:

California Prop. 65:	No ingredient regulated by CA Prop 65 present.
New Jersey & Community RTK:	No ingredient regulated by NJ Right to Know Act present.
Massachusetts RTK:	No ingredient regulated by MA Right to Know Act present.
Pennsylvania RTK:	No ingredient regulated by PA Right to Know Act present.
Rhode Island RTK:	No ingredient regulated by RI Right to Know Act present.

SECTION 16. OTHER INFORMATION:

Issue Date:	8/19/2015
Revision Date:	4/28/2016
Version:	5.0
Further Information:	No data available.
Disclaimer:	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 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.

Safety Data Sheet

Trade Name: XP2 Binding Buffer

Revision Date: 5/10/2016

SECTION 1. IDENTIFICATION OF PRODUCT AND COMPANY:

Product Name: XP2 Binding Buffer

Manufacturer or Supplier Details:

Company Name: Omega Bio-tek, Inc.
Address: 400 Pinnacle Way, Suite 450
Norcross, GA 30071
USA
Telephone: 1-800-832-8896
Email: info@omegabiotek.com
Emergency Telephone: CHEMTREC
USA & Canada: 1-800-424-9300
Outside USA & Canada: 1-703-527-3887

Recommended Use of the Chemical and Restrictions on Use:

Recommended Use: For research use only.

SECTION 2. HAZARDS IDENTIFICATION

Hazard Classification:

OSHA Hazards: Harmful by inhalation, harmful by ingestion, harmful in contact with skin.

Health Hazards:

Acute toxicity, inhalation	Category 4
Acute toxicity, oral	Category 4
Acute toxicity, dermal	Category 4
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

GHS Label Element:

Hazard Symbol:



Signal Word:

Warning

Hazard Statements:

H412 - Harmful to aquatic life with long lasting effects.
H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H332 - Harmful if inhaled.

Safety Data Sheet

Trade Name: XP2 Binding Buffer

Revision Date: 5/10/2016

Precautionary Statements:

P261 - Avoid breathing dust/fumes/gas/mist/vapors/spray.
P311 - Call a POISON CENTER or doctor/physician.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician.
P304 + P340 - IF INHALED: Remove person to fresh air and keep in a position comfortable for breathing.

Potential Health Effects:

Aggravated Medical Conditions: May cause nervous system disturbances.
Symptoms of Overexposure:
Inhalation: Harmful 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.

Carcinogenicity:

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

SECTION 3. COMPOSITION OF/INFORMATION ON INGREDIENTS

Substance or Mixture: Mixture of the substances listed below with non-hazardous additions.

Synonyms/Common Names: Guanidinium thiocyanate, Guanidinium rhodanide, Guanidinium isothiocyanate, Guanidine isothiocyanate

Chemical Name	CAS No.	Concentration (%)
Guanidine thiocyanate $\text{CH}_5\text{N}_3 \cdot \text{CHNS}$	593-84-0	25-50%

Safety Data Sheet

Trade Name: XP2 Binding Buffer

Revision Date: 5/10/2016

SECTION 4. FIRST AID MEASURES

General Advice:	Exit to a safe area. Consult a physician. Seek medical attention.
If Inhaled:	Move to fresh air. If not breathing, give artificial respiration. Seek medical attention.
In Case of Skin Contact:	Exit to safe area. Remove contaminated clothing. Wash thoroughly with soap and water. Seek medical attention.
In Case of Eye Contact:	Flush eyes with clean water for a minimum of 15 minutes keeping eyes open. Seek medical attention.
If Swallowed:	Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention.
Most Important Symptoms and Effects, Acute and Delayed:	May cause pain, irritation or redness, and watering of eyes.
Recommendations for Immediate Medical Attention and Special Treatment:	

SECTION 5. FIREFIGHTING MEASURES

Conditions of Flammability:	Not flammable or combustible.
Suitable Extinguishing Media:	Dry powder, CO ₂ , water spray or alcohol-resistant foam.
Special Protective Equipment for Firefighters:	Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products:	Carbon oxides (CO, CO ₂), sulfur oxides (SO _x), nitrogen oxides (NO _x)
Further Information:	Prevent firefighting water from entering surface water or groundwater.

Safety Data Sheet

Trade Name: XP2 Binding Buffer

Revision Date: 5/10/2016

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear respiratory protection when ventilation is inadequate. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. See Section 8: Exposure Controls/Personal Protection for more details.
Environmental Precautions:	Prevent further leakage if area is safe. Do not let product enter drains. Avoid discharge into the environment.
Emergency Procedures:	Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up:	Use inert absorbent material to soak up spill. Dispose of hazardous waste. Do not flush with water.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling:	Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with skin and eyes. Avoid inhalation of vapors or mist.
Conditions for Safe Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light and moisture. Do not store near acids.
Incompatible Products:	Strong oxidizing agents, strong acids

Safety Data Sheet

Trade Name: XP2 Binding Buffer

Revision Date: 5/10/2016

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate Engineering Controls: Adequate ventilation and access to eye washing stations are required.

Recommendations for Personal Protective Measures:

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 eyewear 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 a laboratory coat.
Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be used.
Hygiene Measures:	Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product. Do not eat, drink or smoke when handling this product.

Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc.

N/A

Components with Workplace Control Parameters:

N/A

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form:	Liquid
Color:	Dark yellow

Odor: No data available

Odor Threshold: No data available

pH: 4.0-6.0

Melting Point/Freezing Point: No data available

Initial Boiling Point/Boiling Range: No data available

Safety Data Sheet

Trade Name: XP2 Binding Buffer

Revision Date: 5/10/2016

Flash Point:	No data available
Evaporation Rate:	No data available
Flammability (Solid, Gas):	No data available
Upper/Lower Limits on Flammability and Explosive Limits:	
Flammability Limit (Upper):	No data available
Flammability Limit (Lower):	No data available
Explosive Limit (Upper):	No data available
Explosive Limit (Lower):	No data available
Vapor Pressure:	No data available
Vapor Density:	No data available
Relative Density:	No data available
Solubility:	
Solubility in Water:	No data available
Solubility (Other):	No data available
Partition Coefficient (n-octanol/ water):	No data available
Auto-Ignition Temperature:	No data available
Decomposition Temperature:	No data available
Viscosity:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid:	Heating, flames, sparks
Materials to Avoid:	Strong acids, strong oxidizing agents, cyanides
Hazardous Decomposition Products:	Carbon oxides (CO _x), sulfur oxides (SO _x), nitrogen oxides (NO _x)

SECTION 11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure:

Inhalation:	Harmful if inhaled. May cause respiratory tract irritation.
Ingestion:	Harmful if swallowed.
Skin:	Harmful if absorbed through skin. May cause skin irritation.

Safety Data Sheet

Trade Name: XP2 Binding Buffer

Revision Date: 5/10/2016

Eyes: May cause eye irritation.

Information on Toxicological Effects:

Acute Toxicity:

Oral LD50:	593 mg/kg (Rat)
Inhalation LC50:	No data available
Dermal LD50:	No data available
Other Information:	Peritoneal LD50: 300 mg/kg (Mouse)
Skin Corrosion/Irritation:	No data available
Serious Eye Damage/Irritation:	No data available
Respiratory or Skin Sensitization:	Components of this product may be absorbed into the body through the skin. Irritating to skin and mucus membranes.
Germ Cell Mutagenicity:	No data available

Carcinogenicity:

IARC:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
NTP:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA:	No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No data available

Teratogenicity: No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposures: No data available

Aspiration Hazard: No data available

Signs and Symptoms of Exposure: Irritating to eyes, respiratory system and skin.

Synergistic Effects: No data available

Additional Information: No data available

Safety Data Sheet

Trade Name: XP2 Binding Buffer

Revision Date: 5/10/2016

SECTION 12. ECOLOGICAL INFORMATION

Toxicity:	EC50: 42.4 mg/L - 48 h (<i>Daphnia</i>)
Persistence and Degradability:	No data available.
Bioaccumulative Potential:	No data available.
Mobility in Soil:	Product is water soluble and may spread in water systems.
PBT and vPvB Assessment:	No data available.
Other Adverse Effects:	Harmful to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

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.
Contaminated Packaging:	Disposal must be made according to official regulations. To minimize exposure, please refer to Section 8: Exposure Control/Personal Protection of this SDS.

SECTION 14. TRANSPORT INFORMATION

DOT:	Not considered dangerous goods.
IMDG:	Not considered dangerous goods.
IATA:	Not considered dangerous goods.

SECTION 15. REGULATORY INFORMATION

US Federal Regulations:	
OSHA Hazards:	Harmful by inhalation, harmful by ingestion, harmful in contact with skin.
Aggravated Medical Conditions:	May cause nervous system disturbances.
Symptoms of Overexposure:	

Safety Data Sheet

Trade Name: XP2 Binding Buffer

Revision Date: 5/10/2016

Inhalation:	Harmful if inhaled. May cause respiratory irritation.
Skin:	Harmful if absorbed through skin. May cause skin irritation.
Eyes:	May cause eye irritation.
Ingestion:	Harmful if swallowed.
SARA 302 Components:	None present or none present in regulated quantities.
SARA 313 Components:	None present or none present in regulated quantities.
SARA 311/312 Hazards:	Acute health hazard

US State Regulations:

California Prop. 65:	No ingredient regulated by CA Prop 65 present.	
Massachusetts RTK:	No component are subject to the MA RTK Act.	
New Jersey RTK:	Component(s)	CAS-No.
	Guanidine thiocyanate	593-84-0
	Water	7732-18-5
Pennsylvania RTK:	Guanidine thiocyanate	593-84-0
	Water	7732-18-5
Rhode Island RTK:	Guanidine thiocyanate	593-84-0
	Water	7732-18-5

SECTION 16. OTHER INFORMATION

Issue Date:	8/29/2016
Revision Date:	5/10/2016
Version:	4.0
Further Information:	No data available.
Disclaimer:	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 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.