

10 May 2021

Kit Components

Product Code	Description
GEN-SCV2-0096	NxSeq SARS-CoV-2 Whole Genome Library Kit, 96 reactions

Components

Description	Part Number
SCV2 Targeting Primers (STP)	F816145-1
Amplification Primer (AP)	F816146-1
PCR Master Mix (MM)	F816147-1
Sample Dilution Buffer	F816148-1
Indexing Buffer	F816149-1
Indexing Enzyme 1 (E1)	F816150-1
Indexing Enzyme 2 (E2)	F816151-1
Indexing Enzyme 3 (E3)	F816152-1
Elution Buffer	F816153-1
PEG/NaCl Solution	F816154-1



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 1 of 8

Section 1. Identification

Product Identifier

Product Name: SCV2 Targeting Primers (STP) Product Code: F816145-1

Recommended use of the chemical and restrictions on use. For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Manufacture/Supplier Details:

Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail:techsupport@LGCGroup.com

Emergency Telephone Numbers

1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

Section 2. Hazard Identification

Classification of the substance/mixture: Not a hazardous substance or mixture.

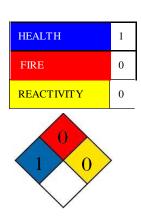
GHS Label elements, including precautionary statements

The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

Hazard statements :	None
Signal word:	None
Precautionary Statements:	None

Precautionary Statements:

HMIS rating (Scale 0-4):



NFPA Rating:



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 3. Composition/Information On Ingredients				
Chemical Name Identifiers Hazardous Approximate Percentage %				
Tris base	CAS: 77-86-1	nonhazardous	-	
EDTA	CAS: 60-00-4	nonhazardous	-	

Chemical Characterization: Mixture

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Hazardous/Non-hazardous Components:

The material is composed of oligonucleotides (with and without non-radioactive modifications) suspended in 5 mM Tris (hydroxymethyl) aminomethane Hydrochloride with 0.05 mM Ethylenediaminetetraacetic acid, pH 8.0.

Section 4. First-Aid Measures			
Description of necessary measures			
Inhalation:	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.		
Skin:	Rinse with plenty of water. If symptoms arise, call a physician.		
Eye:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist call a physician.		
Ingestion: Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.			
Most important symptoms/effects, acute and delayed			

No further relevant information available

Indication of any immediate medical attention and special treatment needed

All treatment should be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5. Fire Fighting Measures	
Extinguishing media: Suitable extinguishing media:	Water spray, carbon dioxide, dry chemical, or appropriate foam.

Unsuitable Extinguishing:

None known



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 3 of 8

Special hazards arising from the substance or mixture

Unusual fire and explosion hazards: Hazardous Combustions products:

Special protective equipment and precautions for the fire-fighters:

No specific fire or explosion hazard None known

Wear self-contained breathing apparatus and protective suit.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

Dispose contaminated material as waste according to item 13.

Section 7. Handling And Storage Precautions for safe handling: Use personal protective equipment such as gloves, goggles, and lab coat. Avoid contact with eyes, skin, and clothing. Conditions for safe storage, including any incompatibilities Storage: Keep in properly labeled containers; store at directed temperature indicated on label. Incompatible materials or Ignition sources: Keep away from strongalkalis, acids and oxidizing agents.

Section 8. Exposure Controls/Personal Protection

Control parametersOccupational exposure Limit values:We are not a ware of any national exposure limit.Appropriate engineering controls:Ensure a dequate ventilation, especially in confined areas.Personal protective equipmentEye protection:Eye protection:Safety glasses with side-shields.Hand Protection:Impervious gloves.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Respiratory Protection:	In case of insufficient ventilation wearsuitable respiratory equipment.
Skin and body protection	Lightweight protective clothing.
Hygi ene mea sures	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	Prevent product from entering drains.

Section 9. Physical And Chemical Properties

Appearance:	Clearliquid
Odor:	None
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
Partition coefficient:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density (water):	No data available
Solubility:	Soluble in water
Upper/lower flammability or explosive limits:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Oxidizing properties:	No data available
Other information:	None

Section 10. Stability And Reactivity

Reactivity:	No specific test data related to reactivity a vailable for this product or its ingredients.
Chemi cal stability	Stable under normal conditions.
Possibility of hazardous reactions	Under normal conditions of storage and usage, hazardous reactions should not occur.
Conditions to a void	No specific data.
Incompatible materials	Strong al kalis, acids and oxidizing agents.
Hazardous decomposition products:	Under normal conditions of storage and usage, hazardous decomposition products should not be produced.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 5 of 8

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity: Not hazardous

Product/Ingredient Name	CAS	Result	Species	Dose	Exposure
Reagent	Not available	Not available	Not available	Not available	Not available

Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure/Observation
Reagent	Not available	Not available	Not available	Not available

Sensitization:	Not available
Mutagenicity:	Not available

Carcinogenicity

Product/Ingredient Name	OSHA	IARC	NTP
Reagent	None of the ingredients	None of the ingredients	None of the ingredients
	listed	listed	listed

Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity- single exposure	None under normal use conditions
Specific target organ toxicity- repeated exposure	None under normal use conditions
Aspiration Hazard	Not available

Information on the likely routes of exposure Routes of entry anticipated: Oral

May be harmful if swallowed



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 6 of 8

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:	May cause eye irritation with susceptible persons.
Inhalation:	May be harmful by inhalation.
Skin contact:	May cause skin irritation in susceptible persons.
Ingestion:	May be harmful if swallowed.
Aspiration Hazard:	Not available.

Delayed and immediate effects and also chronic effects from short and long term exposure No known significant effects or critical hazards.

Numerical measures of toxicity

Not Available

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Reagent	Not available	Not available	Not available

Persistence and degradability:	Not available.
Biodegradation:	Inherently biodegradable.
Bioaccumulative potential:	Does not bioaccumulate.
Mobility in soil:	Not available.
Other adverse effects:	Not available.
Aspiration Hazard:	Not available.

Section 13. Disposal Considerations	

Waste treatment methods

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 14. Transport Information

	UN Number	UN proper shipping name	Transport hazard class(es)	Packaging group	Environmental Hazards
DOT	Not regulated	No information available	No information available	No information available	None
IMDG	Not regulated	No information available	No information available	No information available	None
ΙΑΤΑ	Not regulated	No information available	No information available	No information available	None

Special Precautions for user

None specified.

IATA:

Proper shipping name: Not classified as dangerous in the meaning of transport regulations.

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Hazard class	None
Subsidiary class	None
Packing group UN-No	None None
Marine pollutant	No

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Section 15. Regulatory Information

Safety health and environmental regulations/legislation specific for the substance or mixture

Sara:	Not applicable.
Section 355 (Extremely hazardous substances):	This product is not regulated by SARA.
Section 313 (Specific toxic chemical listings):	This product is not regulated by SARA.
SARA 311/312 Hazards:	Not available.
Chemicals known to cause cancer:	Not available.
Chemicals known to cause reproductive toxicity for females:	Not available.
Chemicals known to cause reproductive toxicity for males:	Not available.
Chemicals known to cause developmental delay:	Not available.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page **8** of **8**

Carcinogenic categories:	Not available.
EPA (Environmental protection agency):	Not available.
TLV (Threshold limit value established by ACGIH):	Not available.
NIOSH-CA (National Institute for Occupational Safety and Health):	Not available.
OSHA-CA (Occupational Safety and Health Administration):	Not available.
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61):	This product does not contain HAPs.
TSCA (Toxic substances control act) California Proposition 65:	This product does not contain chemicals listed under Proposition 65.
WHMIS hazard class:	Non-controlled
GHS label elements:	Not available.
Hazard pictograms:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Signal Word:	Not available.
Hazard-determining components of labeling:	Not available.
Hazard statements:	Not available.
Precautionary statements:	Not available.
National regulations:	Not available.
State right to know:	Not available.
Chemical safety assessment:	A Chemical Safety Assessment has not
	been carried out.

Section 16. Other Information

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with a pplicable regional, national and local laws and regulations.

END OF SDS



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 1 of 8

Section 1. Identification

Product Identifier

Product Name: Amplification Primer (AP) Product Code: F816146-1

Recommended use of the chemical and restrictions on use. For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Manufacture/Supplier Details:

Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

Emergency Telephone Numbers

1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

Section 2. Hazard Identification

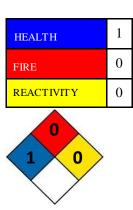
Classification of the substance/mixture: Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

Hazard statements:	None
Signal word:	None
Precautionary Statements:	None

HMIS rating (Scale 0-4):



NFPA Rating:



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 3. Composition/Information On Ingredients				
Chemical Name Identifiers Hazardous Approximate Percentage%				
Tris base	CAS: 77-86-1	nonhazardous	-	
EDTA	CAS: 60-00-4	nonhazardous	-	

Chemical Characterization: Mixture

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Hazardous/Non-hazardous Components:

The material is composed of oligonucleotides (with and without non-radioactive modifications) suspended in 5 mM Tris (hydroxymethyl) aminomethane Hydrochloride with 0.05 mM Ethylenediaminetetraacetic acid, pH 8.0.

Section 4. First-Aid Measures			
Description of necessary measures			
Inhalation:	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.		
Skin:	Rinse with plenty of water. If symptoms arise, call a physician.		
Eye:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist call a physician.		
Ingestion:	Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.		
Most important symptoms/effects, acute and delayed No further relevant information available			

Indication of any immediate medical attention and special treatment needed

All treatment should be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5. Fire Fighting Measures

Extinguishing media:

Suitable extinguishing media:

Water spray, carbon dioxide, dry chemical, or appropriate foam.

Unsuitable Extinguishing:

None known



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 3 of 8

Special hazards arising from the substance or mixture

Unusual fire and explosion hazards: Hazardous Combustions products:

Special protective equipment and precautions for the fire-fighters:

No specific fire or explosion hazard None known

Wear self-contained breathing apparatus and protective suit.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

Dispose contaminated material as waste according to item 13.

Section 7. Handling And Storage Precautions for safe handling: Use personal protective equipment such as gloves, goggles, and lab coat. Avoid contact with eyes, skin, and clothing. Conditions for safe storage, including any incompatibilities Storage: Keep in properly labeled containers; store at directed temperature indicated on label. Incompatible materials or Ignition sources: Keep away from strongalkalis, acids and oxidizing agents.

Section 8. Exposure Controls/Personal Protection

Control parametersOccupational exposure Limit values:We are not a ware of any national exposure limit.Appropriate engineering controls:Ensure a dequate ventilation, especially in confined areas.Personal protective equipmentEye protection:Eye protection:Safety glasses with side-shields.Hand Protection:Impervious gloves.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Respiratory Protection:	In case of insufficient ventilation wears uitable respiratory equipment.
Skin and body protection	Lightweight protective clothing.
Hygi ene mea sures	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	Prevent product from entering drains.

Section 9. Physical And Chemical Properties

Section 10. Stability And Reactivity

Reactivity:	No specific test data related to reactivity a vailable for this product or its ingredients.
Chemi cal stability	Stable under normal conditions.
Possibility of hazardous reactions	Under normal conditions of storage and usage, hazardous reactions should not occur.
Conditions to avoid	No specific data.
Incompatible materials	Strong alkalis, acids and oxidizing agents.
Hazardous decomposition products:	Under normal conditions of storage and usage, hazardous decomposition products should not be produced.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 5 of 8

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity: Not hazardous

Product/Ingredient Name	CAS	Result	Species	Dose	Exposure
Reagent	Not available	Not available	Not available	Not available	Not available

Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure/Observation
Reagent	Not available	Not available	Not available	Not available

Sensitization:	Not available
Mutagenicity:	Not available

Carcinogenicity

Product/Ingredient Name	OSHA	IARC	NTP
Reagent	None of the ingredients	None of the ingredients	None of the ingredients
	listed	listed	listed

Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity-single exposure	None under normal use conditions
Specific target organ toxicity- repeated exposure	None under normal use conditions
Aspiration Hazard	Not available

Information on the likely routes of exposure Routes of entry anticipated: Oral

May be harmful if swallowed



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 6 of 8

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:	May cause eye irritation with susceptible persons.
Inhalation:	May be harmful by inhalation.
Skin contact:	May cause skin irritation in susceptible persons.
Ingestion:	May be harmful if swallowed.
Aspiration Hazard:	Not available.

Delayed and immediate effects and also chronic effects from short and long term exposure No known significant effects or critical hazards.

Numerical measures of toxicity

Not Available

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Reagent	Not available	Not available	Not available

Persistence and degradability:	Not available.
Biodegradation:	Inherently biodegradable.
Bioaccumulative potential:	Does not bioaccumulate.
Mobility in soil:	Not available.
Other adverse effects:	Not available.
Aspiration Hazard:	Not available.

Section 13. Disposal Considerations		
-------------------------------------	--	--

Waste treatment methods

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 14. Transport Information

	UN Number	UN proper shipping name	Transport hazard class(es)	Packaging group	Environmental Hazards
DOT	Not regulated	No information available	No information available	No information available	None
IMDG	Not regulated	No information available	No information available	No information available	None
ΙΑΤΑ	Not regulated	No information available	No information available	No information available	None

Special Precautions for user

None specified.

IATA:

Proper shipping name: Not classified as dangerous in the meaning of transport regulations.

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Hazard class	None
Subsidiary class	None
Packing group UN-No	None None
Marine pollutant	No

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Section 15. Regulatory Information

Safety health and environmental regulations/legislation specific for the substance or mixture

Sara:	Not applicable.
Section 355 (Extremely hazardous substances):	This product is not regulated by SARA.
Section 313 (Specific toxic chemical listings):	This product is not regulated by SARA.
SARA 311/312 Hazards:	Not available.
Chemicals known to cause cancer:	Not available.
Chemicals known to cause reproductive toxicity for females:	Not available.
Chemicals known to cause reproductive toxicity for males:	Not available.
Chemicals known to cause developmental delay:	Not available.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page **8** of **8**

Carcinogenic categories:	Not available.
EPA (Environmental protection agency):	Not available.
TLV (Threshold limit value established by ACGIH):	Not available.
NIOSH-CA (National Institute for Occupational Safety and Health):	Not available.
OSHA-CA (Occupational Safety and Health Administration):	Not available.
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61):	This product does not contain HAPs.
TSCA (Toxic substances control act) California Proposition 65:	This product does not contain
	chemicals listed under Proposition 65.
WHMIS hazard class:	Non-controlled
GHS label elements:	Not available.
Hazard pictograms:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Signal Word:	Not available.
Hazard-determining components of labeling:	Not available.
Hazard statements:	Not available.
Precautionary statements:	Not available.
National regulations:	Not available.
State right to know:	Not available.
Chemical safety assessment:	A Chemical Safety Assessment has not
	been carried out.

Section 16. Other Information

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with a pplicable regional, national and local laws and regulations.

END OF SDS



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 1 of 8

Section 1. Identification

Product Identifier

Product Name: PCR Master Mix(MM) Product Code: F816147-1

Recommended use of the chemical and restrictions on use. For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Manufacture/Supplier Details: Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

Emergency Telephone Numbers

1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

Section 2. Hazards Identification

Classification of the substance/mixture: Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

Hazard statements:	None
Signal word:	None
Precautionary Statements:	None

HMIS rating (Scale 0-4):

HEALTH	0
FIRE	1
REACTIVITY	0
0 0	ł

NFPA Rating:



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 3. Composition/Information on Ingredients			
Chemical Name	Identifiers	Hazardous	Approximate Percentage%
Glycerol	CAS: 56-81-5	hazardous	25-50%
Potassium Phosphate	CAS: 778-77-0	nonhazardous	-
Tris Base	CAS: 77-86-1	nonhazardous	-
EDTA	CAS: 60-00-4	nonhazardous	-
Potassium Chloride	CAS: 7447-40-7	nonhazardous	-
			In 2S Enzyme W2:0.1mM (Approximately
Zinc Chloride	CAS: 7646-85-7	not considered hazardous at given concentration	0.001%)
Dithiothreitol	CAS: 3483-12-3	not considered hazardous at given concentration	-
Sodium Chloride	CAS: 7647-14-5	nonhazardous	-
Triton X-100	CAS: 9002-93-1	not considered hazardous at given concentration	-
Adenosine Triphosphate (ATP)	CAS: 34369-07-8	nonhazardous	-

Chemical Characterization: Mixture

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Hazardous/Non-hazardous Components:

Glycerol 25-50%; Potassium Phosphate, Tris Base, EDTA, Potassium Chloride, Zinc Chloride (in 2S Enzyme W2:0.1mM, approximately 0.001%), Dithiothreitol, Sodium Chloride, Triton X-100, ATP. The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution.

Section 4. First-Aid Measures

Description of necessary measures

Inhalation:	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Skin:	Wash exposed area with soap and water. If symptoms arise, call a physician.
Eye:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes . If symptoms arise, call a physician.
Ingestion:	Give several glasses of milk or water. Vomiting may occur spontaneously, but it is not necessary to induce. Never give anything by mouth to an unconscious person.
Most important	symptoms/effects, acute and delayed
No further releva	ant information available

No further relevant information available

Indication of any immediate medical attention and special treatment needed

All treatment should be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Page **2** of **8**



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 3 of 8

Section 5. Fire Fighting Measures

Extinguishing media: Suitable extinguishing media:	Carbon dioxide, dry chemical, water spray, or alcohol resistant foam.
Unsuitable Extinguishing:	Noneknown
Special hazards arising from the substance or mixture Unus ual fire and explosion hazards: Hazardous Combustions products:	No specific fire or explosion hazard None known
Special protective equipment and precautions for the fire-fighters:	Wear self-contained breathing apparatus and protective suit.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

Dispose contaminated material as waste according to item 13.

Section 7. Handling and Storage

Precautions for safe handling:Avoid inhalation and prolonged exposure. Use personal
protective equipment such as gloves, goggles, and lab
coat. Avoid contact with eyes, skin, and clothing.Conditions for safe storage, including any incompatibilities
Storage:Keep tightly closed in properly labeled containers; store at
directed temperature indicated on label.Incompatible materials or Ignition sources:No dangerous reactions known.



PCR Master Mix (MM).

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 8. Exposure Controls/Personal Protection		
Control parameters		
Occupational exposure Limit values (OSHA PEL):		
	Glycerol: 15mg/m ³ total dust; 5mg/m ³ respirable fraction.	
Appropriate engineering controls:	Safety shower and eye wash. Ensure a dequate ventilation, especially in confined a reas.	
Personal protective equipment		
Eye protection:	Safety glasses with side-shields.	
Hand Protection:	Impervious gloves.	
Respiratory Protection:	None required under normal conditions of use.	
Skin and body protection	Lightweight protective clothing.	
Hygi ene mea sures	Handle in accordance with good industrial hygiene and safety practice.	
Environmental exposure controls	Prevent product from entering drains.	

Section 9. Physical and Chemical Properties

Appearance:	Clearliquid
Odor:	Faint
Odor Threshold:	No data available
pH:	8.0 at 20°C
Melting point/freezing point:	No data available
Initial boiling point & boiling range:	100°C
Flash point:	>100°C
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Partition coefficient:	No data available
Vapor pressure:	0.1hPa at 20°C
Vapor density:	No data available
Relative density (water):	No data available
Solubility:	Soluble in water
Upper/lower flammability or explosive limits:	Lower limit: 0.9%, Upper limit: No data available
Auto-ignition temperature:	Not applicable
Ignition temperature:	400°C
Decomposition temperature:	No data available
Viscosity:	No data available
Oxidizing properties:	No data available



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 5 of 8

Other information:	None
Section 10. Stability and Reactivity	
Reactivity: Chemical stability	No specific test data related to reactivity available for this product or its ingredients. Stable under normal conditions.
Possibility of hazardous reactions	Under normal conditions of storage and usage, hazardous reactions should not occur.
Conditions to avoid	No specific data.
Incompatible materials	None known.
Hazardous decomposition products:	Under normal conditions of storage and usage, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Information on toxicological effects Acute toxicity

Product/Ingredient Name	CAS	Result	Species	Dose	Exposure
Enzyme	Not available	Not available	Not available	Not available	Not available

Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure/Observation
Enzyme	Not available	Not available	Not	Not available
			available	

Sensitization:	Not available
Mutagenicity:	Not available

Carcinogenicity

Product/ingredient Name OSHA IARC NTP	Product/Ingredient Name	OSHA	IARC	NTP
---------------------------------------	-------------------------	------	------	-----



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 6 of 8

Enzyme		e ingredients ited	None of the ingredients listed	None of the ingredients listed			
Reproductive toxicity:		Not available					
Teratogenicity:		Not available					
Specific target organ toxicity- sin	gle exposure	None under norr	None under normal use conditions				
Specific target organ toxicity- rep	peated exposure	May cause kidne	y damage (Nephrotoxin).				
Aspiration Hazard		Not available					
Symptoms related to the physica Eye contact:	al, chemical and t	May cause ey	cteristics ye irritation with susceptible				
Inhalation:		persons. May be harmful by inhalation.					
Skin contact: May cause skin irritation in susceptible persons.							
Ingestion:		•	ful if swallowed.				
Aspiration Hazard:		Not available.					
Delayed and immediate effects effects from short- and long-ten May cause kidney damage (Nepl	m exposure						

Numerical measures of toxicity Not Available

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Enzyme	Not available	Not available	Not available

Persistence and degradability:	Not available.
Biodegradation:	Not available.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 7 of 8

Bioaccumulative potential:	Not available.
Mobility in soil:	Not available.
Other adverse effects: Aspiration Hazard:	Slightly hazardous for water. Prevent product from entering drains. Not a vailable.

Section 13. Disposal Considerations

Waste treatment methods

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14. Transport Information

	UN Number	UN proper shipping name	Transport hazard class(es)	Packaging group	Environmental Hazards
DOT	Not regulated	No information available	No information available	No information available	None
IMDG	Not regulated	No information a vailable	No information available	No information available	None
ΙΑΤΑ	Not regulated	No information a vailable	No information available	No information available	None

Special Precautions for user

None specified.

IATA:

Proper shipping name: Not classified as dangerous in the meaning of transport regulations.

Hazard class	None
Subsidiary class	None
Packing group	None
UN-No	None
Marine pollutant	The mixture consists of components of unknown hazards to the aquatic environment.

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Section 15. Regulatory Information

Safety health and environmental regulations/legislation specific for the substance or mixture



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 355 (Extremely hazardous substances): This product is not regulated by SARA. Section 313 (Specific toxic chemical listings): This product is not regulated by SARA. SARA 311/312 Hazards: Not available. Chemicals known to cause cancer: Not available. Chemicals known to cause reproductive toxicity for females: Not available. Chemicals known to cause reproductive toxicity for males: Not available. Not available. Chemicals known to cause developmental delay: **Carcinogenic categories:** Not available. EPA (Environmental protection agency): Carcinogenicity categories: 7646-85-7 zinc chloride. Water Hazard Class: Water hazard class 1-slightly hazardous for water. TLV (Threshold limit value established by ACGIH): Not available. NIOSH-CA (National Institute for Occupational Safety and Health): Not available. **OSHA-CA** (Occupational Safety and Health Administration): Not available. Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR This product does not contain HAPs. 61): **U.S. State Regulations:** Glycerol is listed under MA-RTK. TSCA (Toxic substances control act) California Proposition 65: This product does not contain chemicals listed under Proposition 65. **International Inventories:** Glycerol is listed under TSCA, PICCS, ENCS, DSL, and AICS. WHMIS hazard class: Non-controlled **GHS** label elements: Not available. Not available. Hazard pictograms: **Decomposition temperature:** Not available. Viscosity: Not available. Not available. Signal Word: Hazard-determining components of labeling: Not available. Hazard statements: Not available. **Precautionary statements:** Not available. National regulations: Not available. State right to know: Not available. A Chemical Safety Assessment has not Chemical safety assessment: been carried out.

Section 16. Other Information

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in a ccordance with a pplicable regional, national and local laws and regulations.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 1 of 8

Section 1. Identification

Product Identifier

Product Name: Sample Dilution Buffer Product Code: F816148-1

Recommended use of the chemical and restrictions on use For research use only. Not intended for human or animal diagnostic or therapeutic uses

Manufacture/Supplier Details: Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

Emergency Telephone Numbers

1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

Section 2. Hazard Identification

Classification of the substance/mixture: Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

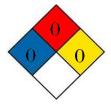
The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

Hazard statements:	None
Signal word:	None
Precautionary Statements:	None

HMIS rating (Scale 0-4):

HEALTH	0
FIRE	0
REACTIVITY	0

NFPA Rating:





Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 3. Composition/Information on Ingredients

Chemical Name	Identifiers	Hazardous	Approximate Percentage %
Tris base	CAS: 77-86-1	nonhazardous	0.12%
EDTA	CAS: 60-00-4	nonhazardous	0.003%
Hydrochloric Acid	CAS: 7647-01-0	nonhazardous	То рН
Water	CAS: N/A	nonhazardous	N/A

Chemical Characterization: Mixture

Any concentrations hown as a range or N/A is to protect confidentiality or is due to batch variation.

Section 4. First-Aid Measures	
Description of a second states	

Description of necessary measures

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
Skin:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops or persists.
Eye:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Ingestion:	Do not induce vomiting. Get medical attention if a dverse health effects develop or persist.

Most important symptoms/effects, acute and delayed

No further relevant information available

Indication of any immediate medical attention and special treatment needed

All treatment should be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5. Fire Fighting Measures

Extinguishing media: Suitable extinguishing media: This is a nonflammable solution. Use an extinguishing agent suitable for the surrounding fire.

Unsuitable Extinguishing:

None known



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 3 of 8

Special hazards arising from the substance or mixture

Unusual fire and explosion hazards: Hazardous Combustions products:

Special protective equipment and precautions for the fire-fighters

No specific fire or explosion hazard. None known

No special measures required.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and materials for containment and cleaning up

Absorb with liquid-binding material. Dispose contaminated material as waste according to item 13.

Section 7. Handling And Storage Precautions for safe handling: No special handling requirements for normal use of this material. Conditions for safe storage, including and incompatibilities Keep label ed container tightly closed and upright. Storage: Keep away from strong oxidizers.

Section 8. Exposure Controls/Personal Protection

Control parameters Occupational exposure Limit values: Contains no substances with occupational exposure limit values. Appropriate engineering controls: General industrial hygiene practice. Personal protective equipment Us e equipment for eye protection tested and a pproved under a ppropriate government standards such as NIOSH (US) or EN 166 (EU)



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Hand Protection:	Protective gloves. The glove material has to be impermeable and resistant to the product/the substance/the preparation.
Respiratory Protection:	None required under normal conditions of use.
Skin and body protection: Hygiene measures Environment exposure controls	Lightweight protective clothing. Handle in accordance with good industrial hygiene and safety practice. Prevent product from entering drains.

Section 9. Physical And Chemical Properties

Appearance	:	Clearliquid
Odor	:	none
Odor Threshold	:	no data available
рН	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point & boiling range	:	no data available
Flash point	:	no data available
Evaporationrate	:	no data available
Flammability (solid, gas)	:	no data available
Partition coefficient	:	no data available
Vapor pressure	:	no data available
Vapor density	:	no data available
Relative density (water)	:	no data available
Solubility	:	Sol uble in water
Upper/lower flammability or explosive limits	:	no data available
Auto-ignition temperature	:	no data available
Decomposition temperature	:	no data available
Viscosity	:	no data available
Other information: None		

Section 10. Stability And Reactivity

Reactivity: Chemical stability	No specific test data related to reactivity available for this product or its ingredients. Stable under recommended storage conditions.
Possibility of hazardous reactions	Under normal conditions of storage and used, hazardous reactions should not occur.
Conditions to avoid	No specific data



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 5 of 8

Incompatible materials	No specific data
Hazardous decomposition products:	Under normal conditions of storage and used, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Information on toxicological effects Acute toxicity

Product/Ingredient Name	CAS	Result	Species	Dose	Exposure
DNA Suspension Buffer, pH 8.0	No information available	No information available	No information available	No information available	No information available

Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure/Observation
DNA Suspension Buffer, pH 8.0	No information available	No information available	No information available	No information available

Sensitization:	Not available
Mutagenicity:	Not available

Carcinogenicity

Product/Ingredient Name	OSHA	IARC	NTP
DNA Suspension Buffer,	None of the ingredients	None of the ingredients	None of the ingredients
pH 8.0	listed	listed	listed

Reproductive toxicity:Not availableTeratogenicity:Not availableSpecific target organ toxicity- single exposureNot availableSpecific target organ toxicity- repeated exposureNot available



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 6 of 8

Aspiration Hazard

Not available

Information on the likely routes of exposure

Routes of entry anticipated: Oral

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

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:	No specific data
Inhalation:	No specific data
Skin contact:	No specific data
Ingestion:	No specific data
Aspiration Hazard:	No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

No known significant effects or critical hazards.

Numerical measures of toxicity

Not available

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
DNA Suspension Buffer, pH 8.0	No information available	No information available	No information available

Persistence and degradability:	Not available
Bioaccumulative potential Mobility in soil	Not available Not available
Other adverse effects	Not available
Aspiration Hazard	No known significant effects or critical hazards.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 13. Disposal Considerations

Waste treatment methods

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations

Section 14. Transport Information

	UN Number	UN proper shipping name	Transport hazard class(es)	Packaging group	Environmental Hazards
DOT	Not regulated	No information available	No information available	No information available	none
IMDG	Not regulated	No information available	No information available	No information available	none
ΙΑΤΑ	Not regulated	No information available	No information available	No information available	none

Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

This product is provided only in non-bulk containers

Special Precautions for user

None specified

IATA:

Proper shipping name: Classified as non-hazardous in the meaning of transport regulations.

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Hazard Class None

Subsidiary class None

Packing group None

UN-No None

Marine Pollutant No

Section 15. Regulatory Information

Safety health and environmental regulations/legislation specific for the substance or mixture



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Sara:	Not applicable
Section 355 (Extremely hazardous substances):	Substance is not listed
Section 313 (Specific toxic chemical listings):	Substance is not listed
SARA 311/312 Hazards:	Substance is not listed
TSCA (Toxic substances control act):	
Proposition 65, PICCS, ENCS, DSL, ALCS:	Substance is not listed
Chemicals known to cause cancer:	Substance is not listed
Chemicals known to cause reproductive toxicity	
or females:	Substance is not listed
Chemicals known to cause reproductive toxicity for males:	Substance is not listed
Chemicals known to cause developmental toxicity:	Substance is not listed
Carcinogenic categories:	
EPA (Environmental protection agency):	Substance is not listed
TLV (Threshold limit value established by ACGIH):	Substance is not listed
NIOSH-CA (National institute for occupational safety and health)	Substance is not listed
OSHA-CA (occupational safety & health administration):	Substance is not listed
GHS label elements:	The product is classified and labeled according to the
GHS laber elements.	Globally Harmonized System (GHS).
Hazard pictograms:	Not applicable
Decomposition temperature:	Not applicable
Viscosity:	Not applicable
Signal Word:	Not applicable
Hazard-determining components of labeling:	Not applicable
Hazard statements:	Not applicable
Precautionary statements:	Not applicable
National regulations:	Substance is not listed
State right to know:	Substance is not listed
Chemical safety assessment:	A Chemical Safety Assessment has not been carried
	out.
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see	This product does not contain HAPs.
40 CFR 61):	
WHMIS hazard class:	This product has been classified according to the
WI HVII J HAZAI A CIASS.	hazard criteria of the CPR and the MSDS contains all of
	the information required by the CPR.

Section 16. Other Information

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with a pplicable regional, national and local laws and regulations.



Indexing Buffer.

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 1 of 8

Section 1. Identification

Product Identifier

Product Name: Indexing Buffer Product Code: F816149-1

Recommended use of the chemical and restrictions on use. For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Manufacture/Supplier Details:

Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

Emergency Telephone Numbers 1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

Section 2. Hazard Identification

Classification of the substance/mixture: Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

Hazard statements : Signal word:	None None	
Precautionary Statements:	None	
HMIS rating (Scale 0-4):	HEALTH	(
	FIRE	1
	REACTIVITY	(
NFPA Rating:	000	

Hazards not otherwise classified:

None

0

0



Indexing Buffer.

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 2 of 8

Section 3. Composition/Information on Ingredients **Chemical Name Identifiers** Hazardous Approximate Percentage % CAS: 77-86-1 Tromethamine nonhazardous -Sodium Chloride CAS: 7440-23-5 nonhazardous -Magnesium Chloride, 6-hydrate CAS: 7791-18-6 nonhazardous -Zinc Chloride CAS: 7646-85-7 0.1mM not considered hazardous at given concentration (0.001%) in 2S Buffer W1 CAS: N/A Water nonhazardous _

Chemical Characterization: Mixture

Any concentration shown as a range or N/A is to protect confidentiality or is due to batch variation.

Section 4. First-Aid Measures		
Description of necessary measures		
Inhalation:	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.	
Skin:	Wash exposed area with soap and water. If irritation arises, call a physician.	
Eye:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.	
Ingestion:	Give several glasses of milk or water. Vomiting may occur spontaneously, but it is no necessary to induce. Never give anything by mouth to an unconscious person.	
•	symptoms/effects, acute and delayed ant information a vailable	

Indication of any immediate medical attention and special treatment needed

All treatment should be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5. Fire Fighting Measures
Extinguishing media:

Suitable extinguishing media:

Carbon dioxide, dry chemical, or appropriate foam.

Unsuitable Extinguishing:

None known



Indexing Buffer.

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 3 of 8

Special hazards arising from the substance or

mixture Unusual fire and explosion hazards: Hazardous Combustions products:

Combustible liquid. Emits toxic fumes under fire conditions. None known

Special protective equipment and precautions for the fire-fighters

Wear self-contained breathing apparatus and protective suit.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental precautions

Eye protection:

Avoid run off to waterways and sewers.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and put in chemical waste container.

 Section 7. Handling and Storage

 Precautions for safe handling:
 Avoid inhalation and prolonged exposure. Use personal protective equipment such as gloves, goggles, and lab coat. Avoid contact with eyes, skin, and clothing.

 Conditions for safe storage, including and incompatibilities Storage:
 Keep tightly closed in properly labeled containers; store in a dry place, at directed temperature indicated on label.

 Incompatible materials or Ignition sources:
 Hygroscopic.

Section 8. Exposure Controls/Personal Protection

Control parameters	
Occupational exposure Limit values:	We are not aware of any national exposure limit.
Appropriate engineering controls:	Safety shower and eye wash. Ensure a dequate ventilation.
Personal protective equipment	

Safety glasses with side shields.



Safety Data Sheet Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 4 of 8

Hand Protection:	Impervious gloves.
Respiratory Protection:	None required under normal working conditions in use.
Skin and body protection: Hygiene measures Environment exposure controls	Lightweight protective clothing. Handle in accordance with good industrial hygiene and safety practice. Prevent product from entering drains.

Section 9. Physical and Chemical Properties

Appearance:	Clear
Odor:	Faint
Odor Threshold:	No data available
pH:	5.5-8.0
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
Partition coefficient:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density (water):	No data available
Solubility:	Soluble in water
Upper/lower flammability or explosive limits:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Other information:	Liquid

Section 10. Stability and Reactivity

Reactivity: Chemical stability	Avoid strong oxidizing agents and strong bases. Stable under normal conditions.
Possibility of hazardous reactions	Under normal conditions of storage and used, hazardous reactions should not occur.
Conditions to avoid	Protect from heat and moisture.
Incompatible materials	No specific data



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 5 of 8

Hazardous decomposition products:

Hydrogen chloride gas, magnesium oxide, carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride gas, carbon oxides, and sodium oxides.

Section 11. Toxicological Information

Information on toxicological effects Acute toxicity: Not hazardous

Product/Ingredient Name	CAS	Result	Species	Dose	Exposure
Buffer	Not available	Not available	Not available	Not available	Not available

Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure/Observation
Buffer	Not available	Not available	Not available	Not available

Sensitization:	Not available
Mutagenicity:	Not available

Carcinogenicity

Product/Ingredient Name	OSHA	IARC	NTP
Buffer	None of the ingredients	None of the ingredients	None of the ingredients
	listed	listed	listed

Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity-single exposure	Toxicity is low
Specific target organ toxicity-repeated exposure	May cause injury. Signs and symptoms may be central nervous systems effects and increased blood sugar levels. Persons with preexisting conditions may be more susceptible.
As piration Hazard	Not available



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 6 of 8

Information on the likely routes of exposure

Routes of entry anticipated: Oral May be harmful if swallowed

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

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:	${\sf May} \ {\sf cause} \ {\sf eye} \ {\sf irritation} \ {\sf with} \ {\sf susceptible} \ {\sf persons}.$
Inhalation:	May be harmful by inhalation.
Skin contact:	May cause skin irritation in susceptible persons.
Ingestion:	May be harmful if swallowed
Aspiration Hazard:	Not available

Delayed and immediate effects and also chronic effects from short- and long-term exposure

No known significant effects or critical hazards.

Numerical measures of toxicity Not available

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Buffer	Not available	Not available	Not available
Persistence and degradability:	Not available		

Bioaccumulative potential Mobility in soil	Not available Not available
Other adverse effects	Not available
Aspiration Hazard	No known significant effects or critical hazards.

Section 13. Disposal Considerations

Waste treatment methods

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations

Packaging waste: Dispose of content and/or container in a ccordance with local, regional, national, and/or international regulations



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 7 of 8

Section 14. Transport Information

	UN Number	UN proper shipping name	Transport hazard class(es)	Packaging group	Environmental Hazards
DOT	Not regulated	No information available	No information available	No information available	None
IMDG	Not regulated	No information available	No information available	No information available	None
ΙΑΤΑ	Not regulated	No information available	No information available	No information available	None

Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

This product is provided only in non-bulk containers

Special Precautions for user

None specified

IATA:

Proper shipping name: Classified as non-hazardous in the meaning of transport regulations.

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Hazard Class None

Subsidiary class None

Packing group None

UN-No None

Marine Pollutant No

Section 15. Regulatory Information

Safety health and environmental regulations/legislation specific for the substance or mixture

Sara:Not applicableSection 355 (Extremely hazardous substances):This product is not regulated by SARA.Section 313 (Specific toxic chemical listings):This product is not regulated by SARA.SARA 311/312 Hazards:This product is not regulated by SARA.TSCA (Toxic substances control act):Tromethamine and magnesium chloride, 6-hydrate



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 8 of 8

Chemicals known to cause cancer:	Not available.
Chemicals known to cause reproductive toxicity	
or females:	Not available.
Chemicals known to cause reproductive toxicity for males:	Not available.
Chemicals known to cause developmental toxicity:	Not available.
Carcinogenic categories:	
EPA (Environmental protection agency):	Carcinogenicity categories: 7646-85-7 zinc chloride
TLV (Threshold limit value established by ACGIH):	Not available.
NIOSH-CA (National institute for occupational safety and health) Not available.
OSHA-CA (occupational safety & health administration):	Not available.
GHS label elements:	The product is classified and labeled according to the
	Globally Harmonized System (GHS).
Hazard pictograms:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Signal Word:	Not available.
Hazard-determining components of labeling:	Not available.
Hazard statements:	Not available.
Precautionary statements:	Not available.
National regulations:	Substance is not listed
State right to know:	This product does not contain chemicals listed under
	California Proposition 65. Tromethamine, Sodium
	Chloride, and Magnesium Chloride, 6-hydrayte are listed
	under MA-RTK.
Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see	This product does not contain HAPs.
40 CFR 61):	
WHMIS hazard class:	This product has been classified according to the hazard
	criteria of the CPR and the MSDS contains all of the
	information required by the CPR.

Section 16. Other Information

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with a pplicable regional, national and local laws and regulations.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 1 of 8

Section 1. Identification

Product Identifier

Product Name: Indexing Enzyme 1 (E1) Product Code: F816150-1

Recommended use of the chemical and restrictions on use. For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Manufacture/Supplier Details: Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

Emergency Telephone Numbers

1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

Section 2. Hazards Identification

Classification of the substance/mixture: Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

Hazard statements:	None
Signal word:	None
Precautionary Statements:	None

HMIS rating (Scale 0-4):

HEALTH	0
FIRE	1
REACTIVITY	0
0 0	ł

NFPA Rating:



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 3. Composition/Information on Ingredients			
			Approximate
Chemical Name	Identifiers	Hazardous	Percentage%
Glycerol	CAS: 56-81-5	hazardous	25-50%
Potassium Phosphate	CAS: 778-77-0	nonhazardous	-
Tris Base	CAS: 77-86-1	nonhazardous	-
EDTA	CAS: 60-00-4	nonhazardous	-
Potassium Chloride	CAS: 7447-40-7	nonhazardous	-
			In 2S Enzyme W2:0.1mM (Approximately
Zinc Chloride	CAS: 7646-85-7	not considered hazardous at given concentration	0.001%)
Dithiothreitol	CAS: 3483-12-3	not considered hazardous at given concentration	-
Sodium Chloride	CAS: 7647-14-5	nonhazardous	-
Triton X-100	CAS: 9002-93-1	not considered hazardous at given concentration	-
Adenosine Triphosphate (ATP)	CAS: 34369-07-8	nonhazardous	-

Chemical Characterization: Mixture

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Hazardous/Non-hazardous Components:

Glycerol 25-50%; Potassium Phosphate, Tris Base, EDTA, Potassium Chloride, Zinc Chloride (in 2S Enzyme W2:0.1mM, approximately 0.001%), Dithiothreitol, Sodium Chloride, Triton X-100, ATP. The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution.

Section 4. First-Aid Measures

Description of necessary measures

Inhalation:	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Skin:	Wash exposed area with soap and water. If symptoms arise, call a physician.
Eye:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes . If symptoms arise, call a physician.
Ingestion:	Give several glasses of milk or water. Vomiting may occur spontaneously, but it is not necessary to induce. Never give anything by mouth to an unconscious person.
Most important	symptoms/effects, acute and delayed
No further releva	ant information available

No further relevant information available

Indication of any immediate medical attention and special treatment needed

All treatment should be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Page 2 of 8



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 3 of 8

Section 5. Fire Fighting Measures

Extinguishing media: Suitable extinguishing media:	Carbon dioxide, dry chemical, water spray, or alcohol resistant foam.
Unsuitable Extinguishing:	Noneknown
Special hazards arising from the substanœ or mixture Unus ual fire and explosion hazards: Hazardous Combustions products:	No specific fire or explosion hazard None known
Special protective equipment and precautions for the fire-fighters:	Wear self-contained breathing apparatus and protective suit.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

Dispose contaminated material as waste according to item 13.

Section 7. Handling and Storage

 Precautions for safe handling:
 Avoid inhalation and prolonged exposure. Use personal protective equipment such as gloves, goggles, and lab coat. Avoid contact with eyes, skin, and clothing.

 Conditions for safe storage, including any incompatibilities
 Keep tightly closed in properly labeled containers; store at directed temperature indicated on label.

 Incompatible materials or Ignition sources:
 No dangerous reactions known.



Г

Indexing Enzyme 1 (E1).

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 8. Exposure Controls/Personal Protection		
Control parameters		
Occupational exposure Limit values (OSHA PEL):		
	Glycerol: 15mg/m ³ total dust; 5mg/m ³ respirable fraction.	
Appropriate engineering controls:	Safety shower and eye wash. Ensure a dequate ventilation, especially in confined a reas.	
Personal protective equipment		
Eye protection:	Safety glasses with side-shields.	
Hand Protection:	Impervious gloves.	
Respiratory Protection:	None required under normal conditions of use.	
Skin and body protection	Lightweight protective clothing.	
Hygi ene mea sures	Handle in accordance with good industrial hygiene and safety practice.	
Environmental exposure controls	Prevent product from entering drains.	

Section 9. Physical and Chemical Properties

Appearance:	Clear liquid
Odor:	Faint
Odor Threshold:	No data available
pH:	8.0 at 20°C
Melting point/freezing point:	No data available
Initial boiling point & boiling range:	100°C
Flash point:	>100°C
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Partition coefficient:	No data available
Vapor pressure:	0.1hPa at 20°C
Vapor density:	No data available
Relative density (water):	No data available
Solubility:	Soluble in water
Upper/lower flammability or explosive limits:	Lower limit: 0.9%, Upper limit: No data available
Auto-ignition temperature:	Not applicable
Ignition temperature:	400°C
Decomposition temperature:	No data available
Viscosity:	No data available
Oxidizing properties:	No data available



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 5 of 8

Other information:	None
Section 10. Stability and Reactivity	
Reactivity: Chemical stability	No specific test data related to reactivity available for this product or its ingredients. Stable under normal conditions.
Possibility of hazardous reactions	Under normal conditions of storage and usage, hazardous reactions should not occur.
Conditions to avoid	No specific data.
Incompatible materials	None known.
Hazardous decomposition products:	Under normal conditions of storage and usage, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Information on toxicological effects Acute toxicity

Product/Ingredient Na	ame CAS	Result	Species	Dose	Exposure
Enzyme	Not available	Not available	Not available	Not available	Not available

Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure/Observation
Enzyme	Not available	Not available	Not	Not available
			available	

Sensitization:	Not available
Mutagenicity:	Not available

Carcinogenicity

Product/ingredient Name OSHA IARC NTP	Product/Ingredient Name	OSHA	IARC	NTP
---------------------------------------	-------------------------	------	------	-----



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 6 of 8

Enzyme	None of the ingr listed	edients	None of the ingredients listed	None of the ingredients listed		
Reproductive toxicity:	Not	available				
Teratogenicity:	Not	Not available				
Specific target organ toxicity- sing	le exposure Nor	None under normal use conditions				
Specific target organ toxicity- repe	eated exposure May	May cause kidney damage (Nephrotoxin).				
As piration Hazard	Not	Not available				
Information on the likely routes of Routes of entry anticipated: Oral Symptoms related to the physical	1	·	iful if s wallowed cteristics			
Eye contact:		May cause e persons.	ye irritation with susceptible			
Inhalation:		May be harmful by inhalation.				
Skin contact:		May cause skin irritation in susceptible persons.				
Ingestion:		May be harmful if swallowed.				
Aspiration Hazard:	I	Not available).			
Delayed and immediate effects a effects from short- and long-terr May cause kidney damage (Neph	n exposure					

Numerical measures of toxicity Not Available

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Enzyme	Not available	Not available	Not available

Persistence and degradability:	Not available.
Biodegradation:	Not available.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 7 of 8

Bioaccumulative potential:	Not available.
Mobility in soil:	Not available.
Other adverse effects: Aspiration Hazard:	Slightly hazardous for water. Prevent product from entering drains. Not available.

Section 13. Disposal Considerations

Waste treatment methods

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14. Transport Information

	UN Number	UN proper shipping name	Transport hazard class(es)	Packaging group	Environmental Hazards
DOT	Not regulated	No information available	No information available	No information available	None
IMDG	Not regulated	No information a vailable	No information available	No information available	None
ΙΑΤΑ	Not regulated	No information a vailable	No information available	No information available	None

Special Precautions for user

None specified.

IATA:

Proper shipping name: Not classified as dangerous in the meaning of transport regulations.

Hazard class	None
Subsidiary class	None
Packing group	None
UN-No	None
Marine pollutant	The mixture consists of components of unknown hazards to the aquatic environment.

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Section 15. Regulatory Information

Safety health and environmental regulations/legislation specific for the substance or mixture



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 355 (Extremely hazardous substances): This product is not regulated by SARA. Section 313 (Specific toxic chemical listings): This product is not regulated by SARA. SARA 311/312 Hazards: Not available. Chemicals known to cause cancer: Not available. Chemicals known to cause reproductive toxicity for females: Not available. Chemicals known to cause reproductive toxicity for males: Not available. Not available. Chemicals known to cause developmental delay: **Carcinogenic categories:** Not available. EPA (Environmental protection agency): Carcinogenicity categories: 7646-85-7 zinc chloride. Water Hazard Class: Water hazard class 1-slightly hazardous for water. TLV (Threshold limit value established by ACGIH): Not available. NIOSH-CA (National Institute for Occupational Safety and Health): Not available. **OSHA-CA** (Occupational Safety and Health Administration): Not available. Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR This product does not contain HAPs. 61): **U.S. State Regulations:** Glycerol is listed under MA-RTK. TSCA (Toxic substances control act) California Proposition 65: This product does not contain chemicals listed under Proposition 65. **International Inventories:** Glycerol is listed under TSCA, PICCS, ENCS, DSL, and AICS. WHMIS hazard class: Non-controlled **GHS** label elements: Not available. Not available. Hazard pictograms: **Decomposition temperature:** Not available. Viscosity: Not available. Not available. Signal Word: Hazard-determining components of labeling: Not available. Hazard statements: Not available. **Precautionary statements:** Not available. National regulations: Not available. State right to know: Not available. A Chemical Safety Assessment has not Chemical safety assessment: been carried out.

Section 16. Other Information

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in a ccordance with a pplicable regional, national and local laws and regulations.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 1 of 8

Section 1. Identification

Product Identifier

Product Name: Indexing Enzyme 2 (E2) Product Code: F816151-1

Recommended use of the chemical and restrictions on use. For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Manufacture/Supplier Details: Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

Emergency Telephone Numbers

1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

Section 2. Hazards Identification

Classification of the substance/mixture: Not a hazardous substance or mixture.

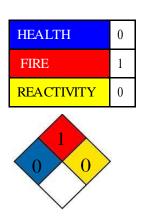
GHS Label elements, including precautionary statements

The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

Hazard statements:	None
Signal word:	None
Precautionary Statements:	None

HMIS rating (Scale 0-4):

NFPA Rating:



Hazards not otherwise classified:

None



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 2 of 8

Section 3. Composition/Information on Ingredients			
Chemical Name	Identifiers	Hazardous	Approximate Percentage%
Glycerol	CAS: 56-81-5	hazardous	25-50%
Potassium Phosphate	CAS: 778-77-0	nonhazardous	-
Tris Base	CAS: 77-86-1	nonhazardous	-
EDTA	CAS: 60-00-4	nonhazardous	-
Potassium Chloride	CAS: 7447-40-7	nonhazardous	-
			In 2S Enzyme W2:0.1mM (Approximately
Zinc Chloride	CAS: 7646-85-7	not considered hazardous at given concentration	0.001%)
Dithiothreitol	CAS: 3483-12-3	not considered hazardous at given concentration	-
Sodi um Chloride	CAS: 7647-14-5	nonhazardous	-
Triton X-100	CAS: 9002-93-1	not considered hazardous at given concentration	-
Adenosine Triphosphate (ATP)	CAS: 34369-07-8	nonhazardous	-

Chemical Characterization: Mixture

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Hazardous/Non-hazardous Components:

Glycerol 25-50%; Potassium Phosphate, Tris Base, EDTA, Potassium Chloride, Zinc Chloride (in 2S Enzyme W2:0.1mM, approximately 0.001%), Dithiothreitol, Sodium Chloride, Triton X-100, ATP. The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution.

Section 4. First-Aid Measures

Description of necessary measures

Inhalation:	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.		
Skin:	Wash exposed area with soap and water. If symptoms arise, call a physician.		
Eye:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms a rise, call a physician.		
Ingestion:	Give several glasses of milk or water. Vomiting may occur spontaneously, but it is not necessary to induce. Never give anything by mouth to an unconscious person.		
Most important symptoms/effects, acute and delayed			

No further relevant information available

Indication of any immediate medical attention and special treatment needed

All treatment should be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 3 of 8

Section 5. Fire Fighting Measures

Extinguishing media: Suitable extinguishing media:	Carbon dioxide, dry chemical, water spray, or alcohol resistant foam.
Unsuitable Extinguishing:	Noneknown
Special hazards arising from the substance or mixture Unus ual fire and explosion hazards: Hazardous Combustions products:	No specific fire or explosion hazard None known
Special protective equipment and precautions for the fire-fighters:	Wear self-contained breathing apparatus and protective suit.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

Dispose contaminated material as waste according to item 13.

Section 7. Handling and Storage

Precautions for safe handling:Avoid inhalation and prolonged exposure. Use personal
protective equipment such as gloves, goggles, and lab
coat. Avoid contact with eyes, skin, and clothing.Conditions for safe storage, including any incompatibilities
Storage:Keep tightly closed in properly labeled containers; store at
directed temperature indicated on label.Incompatible materials or Ignition sources:No dangerous reactions known.



Indexing Enzyme 2 (E2).

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 4 of 8

Section 8. Exposure Controls/Personal Protection		
Control parameters		
Occupational exposure Limit values (OSHA PEL):		
	Glycerol: 15mg/m ³ total dust; 5mg/m ³ respirable fraction.	
Appropriate engineering controls:	Safety shower and eye wash. Ensure a dequate ventilation, especially in confined a reas.	
Personal protective equipment		
Eye protection:	Safety glasses with side-shields.	
Hand Protection:	Impervious gloves.	
Respiratory Protection:	None required under normal conditions of use.	
Skin and body protection	Lightweight protective clothing.	
Hygi ene mea sures	Handle in accordance with good industrial hygiene and safety practice.	
Environmental exposure controls	Prevent product from entering drains.	

Section 9. Physical and Chemical Properties

Appearance:	Clearliquid
Odor:	Faint
Odor Threshold:	No data available
pH:	8.0 at 20°C
Melting point/freezing point:	No data available
Initial boiling point & boiling range:	100°C
Flash point:	>100°C
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Partition coefficient:	No data available
Vapor pressure:	0.1hPa at 20°C
Vapor density:	No data available
Relative density (water):	No data available
Solubility:	Soluble in water
Upper/lower flammability or explosive limits:	Lower limit: 0.9%, Upper limit: No data available
Auto-ignition temperature:	Not applicable
Ignition temperature:	400°C
Decomposition temperature:	No data available
Viscosity:	No data available
Oxidizing properties:	No data available



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 5 of 8

Other information:	None
Section 10. Stability and Reactivity	
Reactivity: Chemical stability	No specific test data related to reactivity available for this product or its ingredients. Stable under normal conditions.
Possibility of hazardous reactions	Under normal conditions of storage and usage, hazardous reactions should not occur.
Conditions to avoid Incompatible materials	No specific data. None known.
Hazardous decomposition products:	Under normal conditions of storage and usage, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Information on toxicological effects Acute toxicity

Product/Ingredient Name	CAS	Result	Species	Dose	Exposure
Enzyme	Not available	Not available	Not available	Not available	Not available

Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure/Observation
Enzyme	Not available	Not available	Not	Not available
			available	

Sensitization:	Not available
Mutagenicity:	Not available

Carcinogenicity

Product/Ingredient Name OSHA IARC NTP	
---	--



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 6 of 8

Enzyme		e ingredients sted	None of the ingredients listed	None of the ingredients listed
eproductive toxicity:		Not available		
eratogenicity:		Not available		
pecific target organ toxicity- si	ngle exposure	None under norr	mal use conditions	
pecific target organ toxicity-re	epeated exposure	May cause kidne	ey damage (Nephrotoxin).	
Aspiration Hazard		Not available		
outes of entry anticipated: Ora	al	iviay be harm	ful if swallowed	
outes of entry anticipated: Ora ymptoms related to the physi Eye contact:		oxicological chara May cause ev		
ymptoms related to the physi		oxicological chara May cause ey persons.	cteristics ye irritation with susceptible	
ymptoms related to the physic		oxicological chara May cause ey persons. May be harm	cteristics	
ymptoms related to the physi Eye contact: nhalation:		oxicological chara May cause ey persons. May be harm May cause si persons.	cteristics ye irritation with susceptible nful by inhalation.	
ymptoms related to the physic Eye contact: nhalation: Skin contact:		oxicological chara May cause ey persons. May be harm May cause si persons.	cteristics ye irritation with susceptible Iful by inhalation. kin irritation in susceptible Iful if swallowed.	
ymptoms related to the physic eye contact: nhalation: skin contact: ngestion:	cal, chemical and t s and also chronic	May cause en persons. May be harm May cause sl persons. May be harm	cteristics ye irritation with susceptible Iful by inhalation. kin irritation in susceptible Iful if swallowed.	

Numerical measures of toxicity Not Available

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Enzyme	Not available	Not available	Not available

Persistence and degradability:	Not available.
Biodegradation:	Not available.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 7 of 8

Bioaccumulative potential:	Not available.
Mobility in soil:	Not available.
Other adverse effects: Aspiration Hazard:	Slightly hazardous for water. Prevent product from entering drains. Not a vailable.

Section 13. Disposal Considerations

Waste treatment methods

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14. Transport Information

	UN Number	UN proper shipping name	Transport hazard class(es)	Packaging group	Environmental Hazards
DOT	Not regulated	No information available	No information available	No information available	None
IMDG	Not regulated	No information a vailable	No information available	No information available	None
ΙΑΤΑ	Not regulated	No information a vailable	No information available	No information available	None

Special Precautions for user

None specified.

IATA:

Proper shipping name: Not classified as dangerous in the meaning of transport regulations.

Hazard class	None
Subsidiary class	None
Packing group	None
UN-No	None
Marine pollutant	The mixture consists of components of unknown hazards to the aquatic environment.

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Section 15. Regulatory Information

Safety health and environmental regulations/legislation specific for the substance or mixture



Safety Data Sheet Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page **8** of **8**

Sara:	Not applicable.
Section 355 (Extremely hazardous substances):	This product is not regulated by SARA.
Section 313 (Specific toxic chemical listings):	This product is not regulated by SARA.
SARA 311/312 Hazards:	Not available.
Chemicals known to cause cancer:	Not available.
Chemicals known to cause reproductive toxicity for females:	Not available.
Chemicals known to cause reproductive toxicity for males:	Not available.
Chemicals known to cause developmental delay:	Not available.
Carcinogenic categories:	Not available.
EPA (Environmental protection agency):	Carcinogenicity categories: 7646-85-7
	zinc chloride.
Water Hazard Class:	Water hazard class 1 – slightly
	hazardous for water.
TLV (Threshold limit value established by ACGIH):	Not available.
NIOSH-CA (National Institute for Occupational Safety and Health):	Not available.
OSHA-CA (Occupational Safety and Health Administration):	Not available.
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR	This product does not contain HAPs.
61):	
U.S. State Regulations:	Glycerol is listed under MA-RTK.
TSCA (Toxic substances control act) California Proposition 65:	This product does not contain
	chemicals listed under Proposition 65.
International Inventories:	Glycerol is listed under TSCA, PICCS,
	ENCS, DSL, and AICS.
WHMIS hazard class:	Non-controlled
GHS label elements:	Not available.
Hazard pictograms:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Signal Word:	Not available.
Hazard-determining components of labeling:	Not available.
Hazard statements:	Not available.
Precautionary statements:	Net eventleble
Frecautional y statements.	Not available.
National regulations:	Not available.
•	Not available. Not available.
National regulations:	Not available.

Section 16. Other Information

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with a pplicable regional, national and local laws and regulations.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 1 of 8

Section 1. Identification

Product Identifier

Product Name: Indexing Enzyme 3 (E3) Product Form: Mixture Product Code: F816152-1

Recommended use of the chemical and restrictions on use. For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Manufacture/Supplier Details: **Biosearch Technologies** 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail:techsupport@LGCGroup.com

Emergency Telephone Numbers

1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

Section 2. Hazards Identification

Classification of the substance/mixture: Not a hazardous substance or mixture.

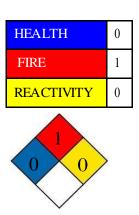
GHS Label elements, including precautionary statements

The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

Hazard statements:	None
Signal word:	None
Precautionary Statements:	None

Precautionary Statements:

HMIS rating (Scale 0-4):



NFPA Rating:



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 3. Composition/Information on Ingredients			
			Approximate
Chemical Name	Identifiers	Hazardous	Percentage%
Glycerol	CAS: 56-81-5	hazardous	25-50%
Potassium Phosphate	CAS: 778-77-0	nonhazardous	-
Tris Base	CAS: 77-86-1	nonhazardous	-
EDTA	CAS: 60-00-4	nonhazardous	-
Potassium Chloride	CAS: 7447-40-7	nonhazardous	-
			In 2S Enzyme W2:0.1mM (Approximately
Zinc Chloride	CAS: 7646-85-7	not considered hazardous at given concentration	0.001%)
Dithiothreitol	CAS: 3483-12-3	not considered hazardous at given concentration	-
Sodium Chloride	CAS: 7647-14-5	nonhazardous	-
Triton X-100	CAS: 9002-93-1	not considered hazardous at given concentration	-
Adenosine Triphosphate (ATP)	CAS: 34369-07-8	nonhazardous	-

Chemical Characterization: Mixture

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Hazardous/Non-hazardous Components:

Glycerol 25-50%; Potassium Phosphate, Tris Base, EDTA, Potassium Chloride, Zinc Chloride (in 2S Enzyme W2: 0.1mM, a pproximately 0.001%), Dithiothreitol, Sodium Chloride, Triton X-100, ATP. The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution.

Section 4. First-Aid Measures

Description of necessary measures

Inhalation:	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Skin:	Wash exposed area with soap and water. If symptoms arise, call a physician.
Eye:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes . If symptoms arise, call a physician.
Ingestion:	Give several glasses of milk or water. Vomiting may occur spontaneously, but it is not necessary to induce. Never give anything by mouth to an unconscious person.
Most important	symptoms/effects, acute and delayed
No further releva	ant information available

No further relevant information available

Indication of any immediate medical attention and special treatment needed

All treatment should be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Page 2 of 8



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 3 of 8

Section 5. Fire Fighting Measures

Extinguishing media: Suitable extinguishing media:	Carbon dioxide, dry chemical, water spray, or alcohol resistant foam.
Unsuitable Extinguishing:	Noneknown
Special hazards arising from the substance or mixture Unusual fire and explosion hazards: Hazardous Combustions products:	No specific fire or explosion hazard None known
Special protective equipment and precautions for the fire-fighters:	Wear self-contained breathing apparatus and protective suit.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

Dispose contaminated material as waste according to item 13.

Section 7. Handling and Storage

 Precautions for safe handling:
 Avoid inhalation and prolonged exposure. Use personal protective equipment such as gloves, goggles, and lab coat. Avoid contact with eyes, skin, and clothing.

 Conditions for safe storage, including any incompatibilities
 Keep tightly closed in properly labeled containers; store at directed temperature indicated on label.

 Incompatible materials or Ignition sources:
 No dangerous reactions known.



Indexing Enzyme 3 (E3).

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 4 of 8

Section 8. Exposure Controls/Personal Protection			
Control parameters			
Occupational exposure Limit values (OSHA PEL):			
	Glycerol: 15mg/m ³ total dust; 5mg/m ³ respirable fraction.		
Appropriate engineering controls:	Safety shower and eye wash. Ensure a dequate ventilation, especially in confined a reas.		
Personal protective equipment			
Eye protection:	Safety glasses with side-shields.		
Hand Protection:	Impervious gloves.		
Respiratory Protection:	None required under normal conditions of use.		
Skin and body protection	Lightweight protective clothing.		
Hygi ene mea sures	Handle in accordance with good industrial hygiene and safety practice.		
Environmental exposure controls	Prevent product from entering drains.		

Section 9. Physical and Chemical Properties

Appearance:	Clearliquid
Odor:	Faint
Odor Threshold:	No data available
pH:	8.0 at 20°C
Melting point/freezing point:	No data available
Initial boiling point & boiling range:	100°C
Flash point:	>100°C
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Partition coefficient:	No data available
Vapor pressure:	0.1hPa at 20°C
Vapor density:	No data available
Relative density (water):	No data available
Solubility:	Soluble in water
Upper/lower flammability or explosive limits:	Lower limit: 0.9%, Upper limit: No data available
Auto-ignition temperature:	Not applicable
Ignition temperature:	400°C
Decomposition temperature:	No data available
Viscosity:	No data available
Oxidizing properties:	No data available



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 5 of 8

Other information:	None
Section 10. Stability and Reactivity	
Reactivity: Chemical stability	No specific test data related to reactivity available for this product or its ingredients. Stable under normal conditions.
Possibility of hazardous reactions	Under normal conditions of storage and usage, hazardous reactions should not occur.
Conditions to avoid	No specific data.
Incompatible materials	None known.
Hazardous decomposition products:	Under normal conditions of storage and usage, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Information on toxicological effects Acute toxicity

Product/Ingredient Name	CAS	Result	Species	Dose	Exposure
Enzyme	Not available	Not available	Not available	Not available	Not available

Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure/Observation
Enzyme	Not available	Not available	Not	Not available
			available	

Sensitization:	Not available
Mutagenicity:	Not available

Carcinogenicity

Product/Ingredient Name	OSHA	IARC	NTP
-------------------------	------	------	-----



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 6 of 8

	lis	ted	listed	None of the ingredients listed	
eproductive toxicity:		Not available			
eratogenicity:		Not available			
pecific target organ toxicity- si	ngle exposure	None under normal use conditions			
pecific target organ toxicity- re	peated exposure	May cause kidne	y damage (Nephrotoxin).		
spiration Hazard		Not available			
ymptoms related to the physic ye contact:	cal, chemical and t	May cause ey	cteristics ye irritation with susceptible		
Inhalation:		persons. May be harm	ful by inhalation.		
Skin contact:		May cause sk persons.	kin irritation in susceptible		
Ingestion:		May be harm	ful if swallowed.		
spiration Hazard:		Not available			
elayed and immediate effects ffects from short- and long-te May cause kidney damage (Nep	erm exposure				

Numerical measures of toxicity Not Available

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Enzyme	Not available	Not available	Not available

Persistence and degradability:	Not available.
Biodegradation:	Not available.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 7 of 8

Bioaccumulative potential:	Not available.
Mobility in soil:	Not available.
Other adverse effects: Aspiration Hazard:	Slightly hazardous for water. Prevent product from entering drains. Not a vailable.

Section 13. Disposal Considerations

Waste treatment methods

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14. Transport Information

	UN Number	UN proper shipping name	Transport hazard class(es)	Packaging group	Environmental Hazards
DOT	Not regulated	No information available	No information available	No information available	None
IMDG	Not regulated	No information a vailable	No information available	No information available	None
ΙΑΤΑ	Not regulated	No information a vailable	No information available	No information available	None

Special Precautions for user

None specified.

IATA:

Proper shipping name: Not classified as dangerous in the meaning of transport regulations.

None
None
None
None
The mixture consists of components of unknown hazards to the aquatic environment.

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Section 15. Regulatory Information

Safety health and environmental regulations/legislation specific for the substance or mixture



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 355 (Extremely hazardous substances): This product is not regulated by SARA. Section 313 (Specific toxic chemical listings): This product is not regulated by SARA. SARA 311/312 Hazards: Not available. Chemicals known to cause cancer: Not available. Chemicals known to cause reproductive toxicity for females: Not available. Chemicals known to cause reproductive toxicity for males: Not available. Not available. Chemicals known to cause developmental delay: **Carcinogenic categories:** Not available. EPA (Environmental protection agency): Carcinogenicity categories: 7646-85-7 zinc chloride. Water Hazard Class: Water hazard class 1-slightly hazardous for water. TLV (Threshold limit value established by ACGIH): Not available. NIOSH-CA (National Institute for Occupational Safety and Health): Not available. **OSHA-CA** (Occupational Safety and Health Administration): Not available. Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR This product does not contain HAPs. 61): Glycerol is listed under MA-RTK. **U.S. State Regulations:** TSCA (Toxic substances control act) California Proposition 65: This product does not contain chemicals listed under Proposition 65. **International Inventories:** Glycerol is listed under TSCA, PICCS, ENCS, DSL, and AICS. WHMIS hazard class: Non-controlled **GHS** label elements: Not available. Not available. Hazard pictograms: **Decomposition temperature:** Not available. Viscosity: Not available. Not available. Signal Word: Hazard-determining components of labeling: Not available. Hazard statements: Not available. **Precautionary statements:** Not available. National regulations: Not available. State right to know: Not available. A Chemical Safety Assessment has not Chemical safety assessment: been carried out.

Section 16. Other Information

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in a ccordance with a pplicable regional, national and local laws and regulations.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 1 of 8

Section 1. Identification

Product Identifier

Product Name: Elution Buffer Product Code: F816153-1

Recommended use of the chemical and restrictions on use For research use only. Not intended for human or animal diagnostic or therapeutic uses

Manufacture/Supplier Details: Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

Emergency Telephone Numbers

1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

Section 2. Hazard Identification

Classification of the substance/mixture: Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

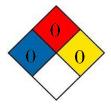
The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

Hazard statements:	None
Signal word:	None
Precautionary Statements:	None

HMIS rating (Scale 0-4):

HEALTH	0
FIRE	0
REACTIVITY	0

NFPA Rating:





Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 3. Composition/Information on Ingredients

Chemical Name	Identifiers	Hazardous	Approximate Percentage %
Tris base	CAS: 77-86-1	nonhazardous	0.12%
EDTA	CAS: 60-00-4	nonhazardous	0.003%
Hydrochloric Acid	CAS: 7647-01-0	nonhazardous	То рН
Water	CAS: N/A	nonhazardous	N/A

Chemical Characterization: Mixture

Any concentration shown as a range or N/A is to protect confidentiality or is due to batch variation.

Section 4. First-Aid Measures	

Description of necessary measures

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
Skin:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops or persists.
Eye:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Ingestion:	Do not induce vomiting. Get medical attention if a dverse health effects develop or persist.

Most important symptoms/effects, acute and delayed

No further relevant information available

Indication of any immediate medical attention and special treatment needed

All treatments hould be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5. Fire Fighting Measures

Extinguishing media: Suitable extinguishing media: This is a nonflammable solution. Use an extinguishing agent suitable for the surrounding fire.

Unsuitable Extinguishing:

None known



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 3 of 8

Special hazards arising from the substance or mixture

Unusual fire and explosion hazards: Hazardous Combustions products:

Special protective equipment and precautions for the fire-fighters

No specific fire or explosion hazard. None known

No special measures required.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and materials for containment and cleaning up

Absorb with liquid-binding material. Dispose contaminated material as waste according to item 13.

Section 7. Handling And Storage Precautions for safe handling: No special handling requirements for normal use of this material. Conditions for safe storage, including and incompatibilities Keep labeled container tightly closed and upright. Storage: Keep away from strong oxidizers.

Section 8. Exposure Controls/Personal Protection

Control parametersOccupational exposure Limit values:Contains no substances with occupational exposure limit values.Appropriate engineering controls:General industrial hygiene practice.Personal protective equipment
Eye protection:Use equipment for eye protection tested and approved under appropriate government
standards such as NIOSH (US) or EN 166 (EU)



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Hand Protection:	Protective gloves. The glove material has to be impermeable and resistant to the product/the substance/the preparation.
Respiratory Protection:	None required under normal conditions of use.
Skin and body protection: Hygiene measures Environment exposure controls	Lightweight protective clothing. Handle in accordance with good industrial hygiene and safety practice. Prevent product from entering drains.

Section 9. Physical And Chemical Properties

A ========		Clearlinuid
Appearance	:	Clearliquid
Odor	:	none
Odor Threshold	:	no data available
рН	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point & boiling range	:	no data available
Flash point	:	no data available
Evaporationrate	:	no data available
Flammability (solid, gas)	:	no data available
Partition coefficient	:	no data available
Vapor pressure	:	no data available
Vapor density	:	no data available
Relative density (water)	:	no data available
Solubility	:	Soluble in water
Upper/lower flammability or explosive limits	:	no data available
Auto-ignition temperature	:	no data available
Decomposition temperature	:	no data available
Viscosity	:	no data available
Other information: None		

Section 10. Stability And Reactivity

Reactivity: Chemical stability	No specific test data related to reactivity available for this product or its ingredients. Stable under recommended storage conditions.
Possibility of hazardous reactions	Under normal conditions of storage and used, hazardous reactions should not occur.
Conditions to avoid	No specific data



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 5 of 8

Incompatible materials	No specific data
Hazardous decomposition products:	Under normal conditions of storage and used, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Information on toxicological effects Acute toxicity

Product/Ingredient Name	CAS	Result	Species	Dose	Exposure
DNA Suspension Buffer, pH 8.0	No information available	No information available	No information available	No information available	No information available

Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure/Observation
DNA Suspension Buffer, pH 8.0	No information available	No information available	No information available	No information available

Sensitization:	Not available
Mutagenicity:	Not available

Carcinogenicity

Product/Ingredient Name	OSHA	IARC	NTP
DNA Suspension Buffer,	None of the ingredients	None of the ingredients	None of the ingredients
pH 8.0	listed	listed	listed

Reproductive toxicity:Not availableTeratogenicity:Not availableSpecific target organ toxicity- single exposureNot availableSpecific target organ toxicity- repeated exposureNot available



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Aspiration Hazard

Not available

Information on the likely routes of exposure

Routes of entry anticipated: Oral

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

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:	No specific data
Inhalation:	No specific data
Skin contact:	No specific data
Ingestion:	No specific data
Aspiration Hazard:	No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

No known significant effects or critical hazards.

Numerical measures of toxicity

Not available

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
DNA Suspension Buffer, pH 8.0	No information available	No information available	No information available

Persistence and degradability:	Not available
Bioaccumulative potential Mobility in soil	Not available Not available
Other adverse effects	Not available
Aspiration Hazard	No known significant effects or critical hazards.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 13. Disposal Considerations

Waste treatment methods

Product waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations

Section 14. Transport Information

	UN Number	UN proper shipping name	Transport hazard class(es)	Packaging group	Environmental Hazards
DOT	Not regulated	No information available	No information available	No information available	none
IMDG	Not regulated	No information available	No information available	No information available	none
ΙΑΤΑ	Not regulated	No information available	No information available	No information available	none

Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

This product is provided only in non-bulk containers

Special Precautions for user

None specified

IATA:

Proper shipping name: Classified as non-hazardous in the meaning of transport regulations.

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Hazard Class None

Subsidiary class None

Packing group None

UN-No None

Marine Pollutant No

Section 15. Regulatory Information

Safety health and environmental regulations/legislation specific for the substance or mixture



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 8 of 8

Sara:	Not applicable
Section 355 (Extremely hazardous substances):	Substance is not listed
Section 313 (Specific toxic chemical listings):	Substance is not listed
SARA 311/312 Hazards:	Substance is not listed
TSCA (Toxic substances control act):	
Proposition 65, PICCS, ENCS, DSL, ALCS:	Substance is not listed
Chemicals known to cause cancer:	Substance is not listed
Chemicals known to cause reproductive toxicity	
or females:	Substance is not listed
Chemicals known to cause reproductive toxicity for males:	Substance is not listed
Chemicals known to cause developmental toxicity:	Substance is not listed
Carcinogenic categories:	
EPA (Environmental protection agency):	Substance is not listed
TLV (Threshold limit value established by ACGIH):	Substance is not listed
NIOSH-CA (National institute for occupational safety and health)	Substance is not listed
OSHA-CA (occupational safety & health administration):	Substance is not listed
GHS label elements:	The product is classified and labeled according to the
GHS laber elements.	Globally Harmonized System (GHS).
Hazard pictograms:	Not applicable
Decomposition temperature:	Not applicable
Viscosity:	Not applicable
Signal Word:	Not applicable
Hazard-determining components of labeling:	Not applicable
Hazard statements:	Not applicable
Precautionary statements:	Not applicable
National regulations:	Substance is not listed
State right to know:	Substance is not listed
Chemical safety assessment:	A Chemical Safety Assessment has not been carried
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see	out.
	This product does not contain HAPs.
40 CFR 61):	
WHMIS hazard class:	This product has been classified according to the
	hazard criteria of the CPR and the MSDS contains all of
	the information required by the CPR.
	· · · ·

Section 16. Other Information

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with a pplicable regional, national and local laws and regulations.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 1 of 8

Section 1. Identification

Product Identifier

Product Name: PEG/NaCl Solution Product Form: Mixture Product Code: F816154-1

Recommended use of the chemical and restrictions on use. For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Manufacture/Supplier Details: Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

Emergency Telephone Numbers

1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

Section 2. Hazards Identification

Classification of the substance/mixture: Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

The substance is classified and labeled according to the Globally Harmonized System (GHS). Not a hazardous substance or mixture.

Hazard statements:	None
Signal word:	None
Precautionary Statements:	None

HMIS rating (Scale 0-4):

HEALTH 0 FIRE 0 REACTIVITY 0

NFPA Rating:



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Section 3. Composition/Information On Ingredients			
Chemical Name	Identifiers	Hazardous	Approximate Percentage %
Poly(ethylene glycol)	CAS: 25322-68-3	nonhazardous	-
Sodi um Chloride	CAS: 7647-14-5	nonhazardous	-

Chemical Characterization: Mixture

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Hazardous/Non-hazardous Components:

The material is composed of Poly(ethylene glycol) and Sodium Chloride. The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution.

Section 4. First-Aid Measures			
Description of r	necessary measures		
Inhalation:	Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.		
Skin:	Wash exposed area with soap and water. If symptoms arise, call a physician.		
Eye:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist call a physician.		
Ingestion:	Never give anything by mouth to an unconscious person. Rinse mouth with water. Vomiting may occur spontaneously. Do not induce vomiting without medicaladvice. If symptoms persist, call a physician.		
Most importan	t symptoms/effects, acute and delayed		
No further relev	vant information a vailable		

Indication of any immediate medical attention and special treatment needed

All treatment should be based on observed sign and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 3 of 8

Section 5. Fire Fighting Measures

Extinguishing media: Suitable extinguishing media:	Water spray, Carbon dioxide, dry chemical, or appropriate foam.
Unsuitable Extinguishing:	None known
Special hazards arising from the substance or mixture Unus ual fire and explosion hazards: Hazardous Combustions products:	Carbon oxides; nature of decomposition products not known. None known
Special protective equipment and precautions for the fire-fighters:	None known Wear self-contained breathing apparatus and protective suit.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment including respiratory protection as conditions warrant. Avoid dust formation. Do not touch or walk through spilled material. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

Dispose contaminated material as waste according to item 13. Do not let product enter drains.

Section 7. Handling and Storage	
Precautions for safe handling:	Avoid inhalation and prolonged exposure. Use personal protective equipment such as gloves, goggles, and lab coat. Avoid contact with eyes, skin, and clothing.
Conditions for safe storage, including any incompatibilities Storage:	Keep tightly closed in properly labeled containers; store at directed temperature indicated on label.
Incompatible materials or Ignition sources:	Avoid strong oxidizing agents.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 4 of 8

Section 8. Exposure Controls/Personal Protection		
Control parameters		
Occupational exposure Limit values (OSHA PEL):	The USA WEELTWA exposure limit of PEG 8000 is 10mg/m ³ .	
Appropriate engineering controls:	Safety shower and eye wash. Ensure a dequate ventilation, especially in confined a reas.	
Personal protective equipment		
Eye protection:	Safety glasses with side-shields.	
Hand Protection:	Impervious nitrile rubber gloves of >0.11 mm thickness.	
Respiratory Protection:	In case of insufficient ventilation wear suitable respiratory equipment.	
Skin and body protection	Lightweight protective clothing.	
Hygi ene mea sures	Handle in accordance with good industrial hygiene and safety practice.	
Environmental exposure controls	Prevent product from entering drains.	

Section 9. Physical and Chemical Properties

Annon 10 1000	Clearlinuid
Appearance:	Clear liquid
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
Partition coefficient:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density (water):	No data available
Solubility:	Soluble in water
Upper/lower flammability or explosive limits:	No data available
Auto-ignition temperature:	305°C(581°F)
Decomposition temperature:	No data available
Viscosity:	No data available
Oxidizing properties:	No data available



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 5 of 8

Exposure

1 h

Other information:

None

Section 10. Stability and Reactivit	Ŷ
Reactivity:	No specific test data related to reactivity available for this product or its ingredients.
Chemi cal stability	Stable under normal conditions.
Possibility of hazardous reactions	Under normal conditions of storage and usage, hazardous reactions should not occur.
Conditions to avoid	No specific data.
Incompatible materials	Strong oxidizing agents, strong acids, strong bases.
Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions Hydrogen chloridegas, Sodium oxides
Other:	Other decomposition products - No data available.Protect from heat and moisture.

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity **Product/Ingredient Name** CAS Result Species Dose Not available Poly(ethylene glycol) 25322-68-3 LD50 Oral: 15,000 mg/kg Rat Not available Sodi um Chloride LD50 Oral: 3,550 mg/kg Notavailable 7647-14-5 Rat Not available Sodium Chloride 7647-14-5 LC50 Inhalation: 42,000 Rat Not available mg/m3 LD50 Dermal: 10,000 Sodium Chloride 7647-14-5 Rabbit Not available Notavailable mg/kg

Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure/Observation
Poly(ethylene glycol) Sodi um Chloride	Mild skin irritation Not available	Rabbit Notavailable	Not available Not available	24 h Not a va ilable

Sensitization: Mutagenicity: Not available Not available

Carcinogenicity



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Product/Ingredient Name	OSHA	IARC	NTP
PEG NaCl	None of the ingredients listed	None of the ingredients listed	None of the ingredients listed
Reproductive toxicity:	Not available		

Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity-single exposure	Not available
Specific target organ toxicity-repeated exposure	Not available
Aspiration Hazard	Not available

Information on the likely routes of exposure

Routes of entry anticipated: Oral

May be harmful if swallowed

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact:	May cause eye irritation with susceptible persons.
Inhalation:	May be harmful by inhalation.
Skin contact:	Mild skin irritation.
Ingestion:	May be harmful if swallowed.
Aspiration Hazard:	Not available.
Delayed and immediate effects and also chronic	

effects from short- and long-term exposure

No known significant effects or critical hazard.

Numerical measures of toxicity

Acute toxicity: LD50 Oral – Rat: >15,000 mg/kg (PEG) LD50 Oral - Rat - 3,550 mg/kg (NaCl) Skin contact: LD50 Dermal Rabbit: >10,000 mg/kg (NaCl)

Section 12. Ecological Information

Data not available. PBT/vPvB assessment not available or required.

Toxicity

Product/ingredient name	Result	Species	Exposure
Sodi um Chloride	LC50:5,840 mg/l	Lepomis macrochirus (Bluegill)	96 h
Sodi um Chloride	NOEC: 1,500 mg/l	Daphnia (water flea)	7 d
Sodi um Chloride	LC50: 1,661 mg/l	Daphnia (water flea)	48 h



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Biodegradation:

Not available.

Page 7 of 8

Bioaccumulative potential:		
	Not available.	
Mobility in soil:	Not available.	
Other adverse effects:	Not available.	
Aspiration Hazard:	Not available.	

Section 13. Disposal Considerations

Waste treatment methods

Product waste: Dispose of content and/or container in a ccordance with local, regional, national, and/or international regulations.

Packaging waste: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14. Transport Information

	UN Number	UN proper shipping name	Transport hazard class(es)	Packaging group	Environmental Hazards
DOT	Not regulated	No information a vailable	No information available	No information available	None
IMDG	Not regulated	No information a vailable	No information available	No information available	None
ΙΑΤΑ	Not regulated	No information a vailable	No information available	No information available	None

Special Precautions for user

None specified.

IATA:

Proper shipping name	: Not classified as dangerous in the meaning of transport regulations.
Hazard class	None
Subsidiary class	None
Packing group	None
UN-No	None
Marine pollutant	No

DOT: This substance is considered to be non-hazardous for transport. No shipping name required.

Section 15.	Regulatory	/Information
-------------	------------	--------------

Safety health and environmental regulations/legislation specific for the substance or mixture



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 05/10/2021 Version: A

Page 8 of 8

Sara:	Not applicable.
Section 355 (Extremely hazardous substances):	This product is not regulated by SARA.
Section 313 (Specific toxic chemical listings):	This product is not regulated by SARA.
SARA 311/312 Hazards:	Not available.
Chemicals known to cause cancer:	Not available.
Chemicals known to cause reproductive toxicity for females:	Not available.
Chemicals known to cause reproductive toxicity for males:	Not available.
Chemicals known to cause developmental delay:	Not available.
Carcinogenic categories:	Not available.
EPA (Environmental protection agency):	Notavailable.
TLV (Threshold limit value established by ACGIH):	Not available.
NIOSH-CA (National Institute for Occupational Safety and Health):	Not available.
OSHA-CA (Occupational Safety and Health Administration):	Not available.
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR	This product does not contain HAPs.
61):	
TSCA (Toxic substances control act) California Proposition 65:	This product does not contain
	chemicals listed under Proposition 65.
WHMIS hazard class:	This product has been classified
	accordingto the hazard criteria of the
	CPR and the SDS contains all of the
GHS label elements:	information required by the CPR. Not available.
Hazard pictograms:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Signal Word:	Not available.
Hazard-determining components of labeling:	Not available.
Hazard statements:	Not available.
Precautionary statements:	Not available.
National regulations:	Not available.
State right to know:	Pennsylvania and New Jersey Right-to-
	Know component: Polyethylene glycol,
	average MW 8,000, CAS-No. 25322-68- 3.
Chemical safety assessment:	A Chemical Safety Assessment has not
	been carried out.

Section 16. Other Information

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in a ccordance with a pplicable regional, national and local laws and regulations.