Safety Data Sheet

Lysis Buffer

CAROLINA®
www.carolina.com

Section 1 Product Description

Product Name: Lysis Buffer
Recommended Use: Science education applications
Synonyms: None known
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

WARNING

Causes skin irritation. Causes serious eye irritation.

GHS Classification:
Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%
Water	7732-18-5	94.04
Tris(Hydroxymethyl) Aminomethane	77-86-1	2.42
Sodium Chloride	7647-14-5	1.25
p-tert-Oxtylphenoxy Polyethyl Alcohol (CAS # 9002-93-1) 100%	9002-93-1	1
Ethylenediaminetetraacetic Acid, Disodium Salt, Dihydrate (EDTA Sodium)	6381-92-6	0.93
Hydrogen Chloride	7647-01-0	0.31
Sodium Hydroxide	1310-73-2	0.05

Section 4 First Aid Measures

Emergency and First Aid Procedures
Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Nitrogen oxides, Sulfur Oxides, Sodium Oxides, Carbon oxides

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.
Isolate area. Keep unnecessary personnel away. Avoid the generation of dusts during clean-up. Avoid creating and inhaling dust. Ventilate the contaminated area.

Environmental Precautions: Avoid breathing material. Avoid contact with skin and eyes.
Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Absorb the liquid and scrub the area with detergent and water. Pick up wash liquid with additional absorbent and place in a disposable container. Contain the discharged material.

Section 7 Handling and Storage

Handling: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin and eyes. Avoid excess heat.

Storage: Suitable for any general chemical storage.
Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Green - general chemical storage

Section 8 Protection Information

	ACGIH		OSHA PEL	
Chemical Name	**(TWA)**	**(STEL)**	**(TWA)**	**(STEL)**
Sodium Chloride	N/A	N/A	N/A	N/A
EDTA, Disodium Salt, Dihydrate	N/A	N/A	N/A	N/A
Hydrogen Chloride	N/A	2 ppm (Ceiling)	N/A	5 ppm (Ceiling)
Sodium Hydroxide	N/A	N/A	2 mg/m3 TWA	N/A

Control Parameters

Engineering Measures: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Good general room ventilation should be sufficient to control airborne contaminates to safe levels.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: Nitrile

Section 9 Physical Data

Formula: See Section 3
Molecular Weight: N/A
Appearance: Colorless Liquid
Odor: None
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Boiling Point: 100 C
Flash Point: No data available
Flammable Limits in Air: N/A
Vapor Pressure: N/A
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): N/A
Specific Gravity: > 1
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: N/A

Section 10 Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: Exposure to moisture
Incompatible Materials: Water-reactive materials, Bromine Trifluoride, Lithium, Caustics (bases), Strong acids, Strong oxidizing agents
Hazardous Decomposition Products: Carbon oxides, Sodium Oxides, Sulfur Oxides, Nitrogen oxides
Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry Inhalation, ingestion, eye or skin contact., Ingestion., Ingestion, skin and eye contact.
Symptoms (Acute): None Known, Diarrhea, Abdominal Cramps, Vomiting, Impaired Kidney Function, , Eye disorders
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Sodium Chloride	7647-14-5	Oral LD50 Rat 3000 mg/kg Oral LD50 Mouse 4 GM/KG		
p-tert-Oxtylphenoxy Polyethyl Alcohol (CAS # 9002-93-1) 100%	9002-93-1	Oral LD50 Rat 3800 mg/kg Oral LD50 Rat 1900 mg/kg Oral LD50 Rat 1800 mg/kg		
EDTA, Disodium Salt, Dihydrate	6381-92-6	Oral LD50 Rat 2000 mg/kg		
Hydrogen Chloride	7647-01-0	Oral LD50 Rabbit 900 mg/kg		INHALATION LC50 Rat 3700 ppm INHALATION LC50 Mouse 1108 ppm INHALATION LC50 Rat 45000 MG/M3 INHALATION LC50 Rat 8300 MG/M3

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Sodium Chloride	7647-14-5	Not listed	Not listed	Not listed
EDTA, Disodium Salt, Dihydrate	6381-92-6	Not listed	Not listed	Not listed
Hydrogen Chloride	7647-01-0	Not listed	Not listed	Not listed
Sodium Hydroxide	1310-73-2	Not listed	Not listed	Not listed

Chronic Effects:
Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2, No information available
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA., No information available, To the best of our knowledge, the toxicological properties of this mixture have not been thoroughly evaluated.

Safety Data Sheet

Section 12 Ecological Data

Overview: Slight ecological hazard. In high concentrations, this product may be dangerous to plants and/or wildlife. Keep out of waterways.
Mobility: No data
Persistence: Dissolved into water, Photodegradation, Evaporation into atmosphere, dissolved in water.
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Sodium Chloride	7647-14-5	96 HR LC50 LEPOMIS MACROCHIRUS 12946 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA 1000 MG/L
EDTA, Disodium Salt, Dihydrate	6381-92-6	
Hydrogen Chloride	7647-01-0	96 HR LC50 GAMBUSIA AFFINIS 282 MG/L [STATIC]
Sodium Hydroxide	1310-73-2	Aquatic LC50 (96h) Rainbow Trout 45.4 MG/L

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14 Transport Information

Ground - DOT Proper Shipping Name:
Not regulated for transport

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Sodium Chloride	7647-14-5	No	No	No	No	No
EDTA, Disodium Salt, Dihydrate	6381-92-6	No	No	No	No	No
Hydrogen Chloride	7647-01-0	Hydrochloric acid	5000 lb RQ	5000 lb final RQ; 2270 kg final RQ	500 lb TPQ (gas only)	No
Sodium Hydroxide	1310-73-2	No	1000 lb RQ	1000lb (454kg) final RQ	No	No

Section 16 Additional Information

Revised: 09/09/2015 **Replaces: 06/01/2015** **Printed: 10-29-2015**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation
IARC	International Agency for Research on Cancer
N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
IDLH	Immediately dangerous to life and health