

# SAFETY DATA SHEET

## SECTION 1. PRODUCT IDENTIFICATION

**1.1 Product Name:** 10X Phosphate Buffer Saline (PBS), Sterile

**1.2 Catalog Number:** APL-1042

**Synonyms Name:** No information available

**1.3 Material uses:**

Other non-specified industry: Analytical reagent.

**1.4 Company:** APOLO Biochemical, Inc  
575 ELMWOOD AVE.  
MC56940A, ROCHESTER,  
NY 14642, USA

**1.5 Customer Information E-mail:** info@apolobiochem.com / order@apolo.com.tw

## SECTION 2. HAZARDS IDENTIFICATION

**2.1 Physical state:** Liquid.

**2.2 OSHA/HCS status:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**2.3 Emergency overview:** WARNING!

CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:

MUCOUS MEMBRANES, SKIN, EYES, STOMACH.

MAY BE HARMFUL IF SWALLOWED.

Do not ingest. Avoid contact with skin and clothing. Avoid breathing vapor or mist.

Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

**2.4 Routes of entry:** Inhalation. Ingestion.

**2.5 Potential acute health effects:**

**Eyes:** Irritating to eyes.

**Skin:** Irritating to skin.

**Inhalation:** Irritating to respiratory system.

**Ingestion:** Harmful if swallowed.

**Carcinogenic effects:** No known significant effects or critical hazards.

**Mutagenic effects:** No known significant effects or critical hazards.

**Teratogenicity / Reproductive toxicity:** No known significant effects or critical hazards.

**Medical conditions aggravated by overexposure:** Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to the substance can produce target organs damage.



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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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### 3.1 United States

Name	CAS number	% by Weight
Water	7732-18-5	80 - 90
Sodium Chloride	7647-14-5	5 - 10
Sodium Phosphate, Dibasic, Anhydrous	7558-79-4	1 - 5
Potassium Chloride	7447-40-7	0 - 1
Potassium Phosphate, Monobasic	7778-77-0	0 - 1

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## SECTION 4. FIRST-AID MEASURES

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**4.1 Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.

**4.2 Skin contact:** Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**4.3 Inhalation:** Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. 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 unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**4.4 Ingestion:** Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**4.5 Protection of first-aiders:** No action shall be taken involving any personal risk or without suitable training.

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## SECTION 5. FIRE-FIGHTING MEASURES

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**5.1 Flammability of the product:** No specific hazard.

**5.2 Extinguishing media:**

**Suitable:** Use an extinguishing agent suitable for the surrounding fire.

**Not suitable:** None known.

**Special exposure hazards:** Not available.

**Special protective equipment for fire-fighters:** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.



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## SECTION 6. ACCIDENTAL RELEASE MEASURES

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- 6.1 Personal Precautions:** Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
- 6.2 Environmental Precautions:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- 6.3 Methods for Containment and Clean Up:** If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

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## SECTION 7. HANDLING AND STORAGE

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- 7.1 Handling:** Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Wash thoroughly after handling.
- 7.2 Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

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## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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**Consult local authorities for acceptable exposure limits.**

- 8.1 Engineering measures:** Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- 8.2 Personal protection:**

**Eyes:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: splash goggles

**Skin:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Body: Recommended: lab coat

**Respiratory:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Hands:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: nitrile rubber

**Hygiene measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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**Physical State**

Liquid

**Boiling/condensation point**

The lowest known value is 99.9°C (211.8°F) (Water).



**Melting/freezing point** May start to solidify at -0.1°C (31.8°F) based on data for: Water.

**Evaporation rate** 0.36 (Water) compared with (n-BUTYL ACETATE=1)

## SECTION 10. STABILITY AND REACTIVITY

- 10.1 Stability and reactivity:** The product is stable.
- 10.2 Incompatibility with various substances:** Reactive or incompatible with the following materials: organic materials and metals.
- 10.3 Hazardous decomposition products:** These products are halogenated compounds, hydrogen chloride.
- 10.4 Hazardous polymerization:** Will not occur.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Toxicity data

#### United States

<u>Product/ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Sodium Chloride	LD50	3000 mg/kg	Oral	Rat
	LC50	>42000 mg/m <sup>3</sup> (1 hour/hours)	Inhalation	Rat

**Chronic effects on humans:** Contains material which causes damage to the following organs: mucous membranes, skin, eyes, stomach.

**Other toxic effects on humans:** Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant).

Slightly hazardous in case of ingestion.

### Specific effects

**Carcinogenic effects:** No known significant effects or critical hazards.

**Mutagenic effects:** No known significant effects or critical hazards.

**Teratogenicity / Reproductive toxicity:** No known significant effects or critical hazards

### Sensitization

**Ingestion:** No known significant effects or critical hazards.

**Inhalation:** Irritating to respiratory system.

**Eyes:** Irritating to eyes.

**Skin:** Irritating to skin.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity data

#### United States

<u>Product/ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
Sodium Chloride	Daphnia magna (EC50)	48 hour/hours	402.6 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	6094 mg/l
	Pimephales promelas (LC50)	96 hour/hours	6390 mg/l
	Pimephales promelas (LC50)	96 hour/hours	7050 mg/l

Pimephales promelas (LC50)	96 hour/hours	7100 mg/l
Pimephales promelas (LC50)	96 hour/hours	7200 mg/l

**Environmental precautions:** No known significant effects or critical hazards.

**Products of degradation:**

These products are halogenated compounds, phosphates. Some metallic oxides.

**Toxicity of the products of biodegradation:**

The product itself and its products of degradation are not toxic.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Waste disposal

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

**Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.**

**The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.**

**Refer to Section 7: HANDLING AND STORAGE and Section 8:**

**EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**

## SECTION 14. TRANSPORT INFORMATION

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	-	CHEMICALS, N.O.S.	-	-		Not available.

PG\* : Packing group

## SECTION 15. REGULATORY INFORMATION

### United States

#### HCS Classification

Irritating material

Target organ effects

#### U.S. Federal regulations

TSCA 8(b) inventory: Listed

SARA 302/304/311/312 extremely hazardous substances: No products were found.



SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Sodium Phosphate, Dibasic, Anhydrous;  
Sodium Chloride

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium

Phosphate, Dibasic, Anhydrous: Immediate (acute) health hazard; Sodium Chloride :

Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Sodium Phosphate, Dibasic, Anhydrous

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

#### **State regulations**

Pennsylvania RTK: Sodium Phosphate, Dibasic, Anhydrous:  
(environmental hazard, generic environmental hazard)

Massachusetts RTK: Sodium Phosphate, Dibasic, Anhydrous

New Jersey: Sodium Phosphate, Dibasic, Anhydrous; Potassium Phosphate,  
Monobasic  
; Water

#### **Canada**

##### **WHMIS (Canada)**

Class D-2B: Material causing other toxic effects (Toxic).

##### **CEPA DSL/CEPA NDSL**

CEPA DSL: Sodium Phosphate, Dibasic, Anhydrous; Water; Sodium Chloride

**This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.**

#### **EU regulations**

##### **Risk phrases**

This product is not classified according to EU legislation.

#### **International regulations**

##### **International lists**

Australia (NICNAS): Sodium Phosphate, Dibasic, Anhydrous; Potassium Chloride ; Potassium Phosphate, Monobasic ; Water; Sodium Chloride

China: Sodium Phosphate, Dibasic, Anhydrous; Potassium Chloride ; Potassium Phosphate, Monobasic ; Sodium Chloride

Germany water class: Sodium Phosphate, Dibasic, Anhydrous; Potassium Chloride ; Sodium Chloride

Japan (METI): Sodium Phosphate, Dibasic, Anhydrous; Potassium Chloride ; Potassium Phosphate, Monobasic ; Water; Sodium Chloride

Korea (TCCL): Sodium Phosphate, Dibasic, Anhydrous; Potassium Chloride ; Potassium Phosphate, Monobasic ; Water; Sodium Chloride

Philippines (RA6969): Sodium Phosphate, Dibasic, Anhydrous; Potassium Chloride ; Potassium Phosphate, Monobasic ; Water; Sodium Chloride

## SECTION 16. OTHER INFORMATION

### 16.1 Label requirements: WARNING!

CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

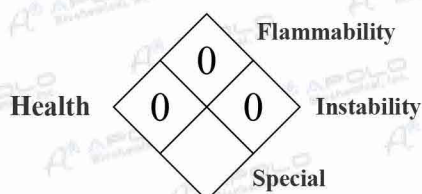
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:

MUCOUS MEMBRANES, SKIN, EYES, STOMACH.

MAY BE HARMFUL IF SWALLOWED.

### 16.2 National Fire Protection:

Association (U.S.A.)



**16.3** The above information is correct to the best of our present knowledge but does not purport to be all inclusive and should be used only as a guide. The product is for research use only and for experienced personnel. It must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The burden of safe use of this material rests entirely with the user.

**Product has not been fully validated for medical applications. For research use only.**

### 16.4 Prepared by: APOLO Biochemical, Inc.

*The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. APOLO shall not be held liable for any damage resulting from handling or contact with the above product.*