BIOMAX

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SAFETY DATA SHEET (SDS)

SDS DATE : Nov, 2022

Section 1. Product And Company Identification

1. Product identifier

1.1. Product Name : PicoSens™ Alkaline Phosphatase Activity Assay Kit

1.2. Product Code : BM-ALK-500

2. Details of the supplier of the safety data sheet

2.1. Company: BIOMAX, Inc.,

2.2. Address : Keumkang Penterium IX Tower CORE-C 7F, 46, Galmaesunhwan-ro 166beon-gil, Guri-si, Gyeonggi-do, Republic of Korea

2.3. Telephone: +82-2-3296-3158

2.4. Emergency Phone : +82-2-3296-3159

2.5. FAX: +82-2-973-2858

3. Product use

3.1. For research use only.

Section 2. Hazard identification

Component	Description	Volume	Safety Information
5X ALP Assay Buffer	Proprietary buffer	20 ml	No hazards
ALP Substrate	Tablet	10 Tablets	No hazards
ALP Positive Control	Liquid	20 $\mu\ell$	No hazards
ALP Stop Solution	Proprietary buffer (contain NaOH)	10 ml	See below

1.1 **Sodium hydroxide**

Emergency Overview

GHS Classification: Corrosive to metals (Category 1)
Skin corrosion (Category 1A)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram:

Signal word: Danger

Hazard statement(s): H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage
H402 Harmful to aquatic life.

Precautionary statement(s):

P234 Keep only in original container.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

P405 Store locked up.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.
P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard: 3
Flammability: 0
Physical hazards: 1

NFPA Rating

Health Hazard: 3
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

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

Section 3. Composition/Information on ingredients

Component	CAS Number	EC-No.	Molecular Weight	Formula	Concentration
Sodium hydroxide	1310-73-2	215-185-5	40	NaOH	<20%

Section 4. First Aid Measures

Sodium hydroxide :

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact: Wash off with soap and plenty of water. Consult a physician.
In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5. Fire-fighting Measures

Sodium hydroxide :

Condition of flammability: Not flammable or combustible.
Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.
Hazardous combustion products: Hazardous decomposition products formed under fire conditions— carbon oxides, nitrogen oxides.

Section 6. Accidental Release Measures

Sodium hydroxide :

Personal precautions: Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods for cleaning up: Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13). Do not flush with water.

Section 7. Handling And Storage

Sodium hydroxide :

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Keep away from sources of ignition - no smoking.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Recommended storage temperature: -20°C.

Section 8: Exposure Controls/Personal Protection

Components	CAS-No.	Value	Control parameters	Basis
Sodium hydroxide	1310-73-2	TWA	2 mg/m^3	USA. Occupational Exposure Limits (OSHA) – Table Z-1 – Limits for Air Contaminants
		C	2 mg/m^3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation Skin irritation		
		C	2 mg/m^3	USA. ACGIH Threshold Limit Values (TLV)

	Remarks	Upper Respiratory Tract irritation Eye irritation Skin irritation		
		C	2 mg/m^3	USA. NIOSH Recommended Exposure Limits

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

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

Eye protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

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

Hygiene measures

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

Section 9: Physical And Chemical Properties

Property	Sodium hydroxide
Appearance:	Colorless liquid
pH:	No data available
Water Solubility:	Soluble in water
Other Solubility:	No data available
Boiling Point (°C):	No data available
Melting Point (°C):	No data available
Flash Point (°C):	No data available
Ignition Temperature (°C):	No data available
Density:	No data available

Section 10: Stability And Reactivity

Property	Sodium hydroxide
Chemical Stability:	Stable under recommended storage conditions
Conditions to Avoid:	No data available
Materials to Avoid:	Acids, Organic materials, Chlorinated solvents, Aluminum, Phosphorus, Tin/tin oxides, Zinc
Hazardous decomposition: products:	No data available

Section 11: Toxicological Information

Sodium hydroxide:

Acute toxicity: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

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

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity:no data available

Specific target organ toxicity – single exposure (GHS): no data available

Specific target organ toxicity – repeated exposure (GHS): no data available

Potential Health Effects

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

Signs and Symptoms of Exposure: Exposure may cause a burning sensation, cough, wheezing, laryngitis, shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema. Material is extremely destructive tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Synergistic Effects: no data available

Additional information: RTECS: not available

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

Section 12: Ecological Information

Sodium hydroxide:

Persistence and degradability: no data available

Toxicity: Toxicity to fish: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

Section 13: Disposal Considerations

Product: Observe all federal, state, and local environmental regulations. Contact licensed professional waste disposal service to dispose of this material.

Contaminated packaging: Dispose of as unused product.

Section14: Transport Information

Sodium hydroxide:

DOT (US): UN-Number: 1824, Class: 8, Packing group: II; Proper shipping name: Sodium hydroxide solution; Poison Inhalation Hazard: No

IMDG: UN-Number: 1824, Class: 8, Packing group: II; EMS-No: F-A, S-B; Proper shipping name: Sodium hydroxide solution

IATA: UN-Number: 1824, Class: 8, Packing group: II; Proper shipping name: Sodium hydroxide solution

Section 15: Regulatory Information

1. Regulation under the Occupational Safety and Health Act

1.1 Harmful Substances Required Permission for Manufacture - Not relevant
1.2 Harmful Substances Prohibited from Manufacturing - Not relevant
1.3 Carcinogenic Substances - Not relevant
1.4 Controlled Substances Subject to Environment Monitoring - Not relevant
1.5 Controlled Substances Subject to Health Examination - Not relevant
1.6 Hazardous substances requiring management - Not relevant

2. Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

2.1 Toxic Chemicals - Relevant
2.2 Observational chemicals - Not relevant
2.3 Restricted Chemicals - Not relevant
2.4 Prohibited Chemicals - Not relevant
2.5 Accident Precaution Chemicals - Not relevant

3. Dangerous Substances Safety Management Act

3.1 Not relevant

4. Wastes Control Act

4.1 Follow article 13 of the act to dispose the product waste

5. Other regulations

KECI Number
Not in compliance with the inventory

Section 16: Other information

OTHER INFORMATION:

PREPARATION INFORMATION:

DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions.

It does not represent any guarantee of the properties of the product. BIOMAX, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.