Plasmid *midi*PREP Kit

1. IDENTIFICATION OF THE PREPARATION/SUBSTANCE AND OF THE COMPANY

Preparation Name: Plasmid midiPREP Kit
Catalogue number of the product: PDP02-0020
Use of the preparation: For laboratory use.
Company identification: BIO-HELIX Co.,LTD.
Site: http://www.bio-helix.com
E-mail: info@bio-helix.com

2. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredients:
Component 1: Buffer
M1: 1 piece(s)
Contains no hazardous substances in concentrations to be declared
Component2: Buffer
M2: 1 piece(s)
0.2-1% Sodium Hydroxide; CAS-No. 1310-73-2
0.5-2% Sodium Dodecyl Sulfate; CAS-No. 151-21-3 Component3:
Buffer M3: 1 piece(s)
5-10% Guanidine Hydrochloride; CAS-No. 50-01-1 Component 4:
Buffer W1: 1 piece(s)
5-10% Guanidine Hydrochloride; CAS-No. 50-01-1 Component 5:
Buffer W2: 1 piece(s)
No hazardous substances in concentrations to be declared.
Component 6:
Buffer E: 1 piece(s)
No hazardous substances in concentrations to be declared.
Component 7:
RNase A: 1 piece(s)
2.5-10% Nuclease, ribo; CAS-No. 900-1-99-4 Other components:
Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1999/45/EC.

3. HAZARD IDENTIFICATION

Sodium Hydroxide:
POISON! DANGER! CORROSIVE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. CAUSES BURNS TO ANY AREA OF CONTACT. REACTS WITH WATER, ACIDS AND OTHER MATERIALS. Health Rating: 3 - Severe (Poison)
Flammability Rating: 0 - None

Reactivity Rating: 2 - Moderate Contact
Rating: 4 - Extreme (Corrosive)
Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER
GLOVES Storage Color Code: White Stripe (Store Separately)
Potential Health
Effects Inhalation:
Severe irritant. Effects from inhalation of dust or mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur.
Ingestion:
Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, fall in blood pressure. Damage may appear days after exposure.
Skin Contact:
Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures. Eye Contact:
Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.
Chronic Exposure:
Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.
Aggravation of Pre-existing Conditions:
Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.
Sodium Dodecyl Sulphate:
WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN OR RESPIRATORY
REACTION. Health Rating: 1 - Slight
Flammability Rating: 3 - Severe (Flammable)
Reactivity Rating: 1 - Slight
Contact Rating: 3 - Severe (Life)
Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER
GLOVES Storage Color Code: Red (Flammable)
Potential Health
Effects Inhalation:
Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. May cause allergic reaction in sensitive individuals.
Ingestion:
Large doses may cause gastrointestinal distress, nausea and diarrhea.
Skin Contact:
Mildly irritating to skin, causes dryness and a rash on continued exposure.
May cause allergic skin reactions.
Eye Contact:
Causes irritation, redness, and pain.
Chronic Exposure:
Chronic exposure may cause skin effects.
Aggravation of Pre-existing Conditions:
Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance.

Guanidine Hydrochloride:
WARNING! CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. HARMFUL IF SWALLOWED OR INHALED.
Health Rating: 2 - Moderate
Flammability Rating: 1 - Slight
Reactivity Rating: 0 - None
Contact Rating: 2 - Moderate
Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES Storage Color Code: Green (General Storage)
Potential Health Effects Inhalation:
Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. Ingestion:
Toxic. May cause neurological disturbances. Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.
Skin Contact:
Causes irritation to skin. Symptoms include redness, itching, and pain.
Eye Contact:
Causes irritation, redness, and pain.

4. FIRST-AID MEASURES

Sodium Hydroxide:
Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion:
DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Skin Contact:
Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.
Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
Note to Physician:
Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.
Sodium Dodecyl Sulphate:
Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion:
Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact:
Immediately flush skin with plenty of soap and water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
Guanidine Hydrochloride:
Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion:
Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Skin Contact:
Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES
Extinguishing media: No restriction.
Decomposition: Dangerous decomposition is not anticipated.

6. ACCIDENTAL RELEASE MEASURES
Actions to be taken on spillage:
Dilute spilled liquids with plenty of water and adsorb.
Absorbent material: No restriction.
Actions to be taken to limit
Damage: Special measures to limit damage are not necessary.

7. HANDLING AND STORAGE
Handling: Open and handle vessels carefully.
Storage: Store at room temperature.
Storage Procedures: Do not store together with acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Respiratory protection: No personal respiratory protective equipment normally required. Eye protection: Safety glasses
Hand protection: One-way gloves
Hygiene measures: Wash hands before and after use.

9. PHYSICAL AND CHEMICAL PROPERTIES
Buffer M1
Form: liquid
Miscibility with water:
immiscible pH : 7.6

Buffer M2
Form: liquid
Miscibility with water:
immiscible pH : 13
Buffer M3
Form: liquid
Miscibility with water:
immiscible pH : 4.5
Buffer W1
Form: liquid
Miscibility with water:
immiscible pH : 7.0
Buffer W2
Form: liquid
Miscibility with water:
immiscible pH : 7.5
Buffer E
Form: liquid
Miscibility with water:
immiscible pH : 8.5
RNase A
Form: liquid
Miscibility with water:
immiscible pH : 6.8

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.
Conditions to Avoid: Reacts with alkalis and oxidizing agents. Hazardous Decomposition Products: Danger of toxic pyrolysis products.

11. TOXICOLOGICAL INFORMATION

Buffer M2 Sodium
Hydroxide
Toxicity (others): LD50 intra peritoneal mouse 40
mg/kg LDLO (oral, rabbit) 500 mg/kg
Sodium Dodecyl Sulfate
Oral toxicity: LD50 rat 1.288
mg/kg Buffer M3
Guanidine Hydrochloride
Oral toxicity: LD50 rat 475 mg/kg
Toxicity (inhalation): LD50 rat 5.3 mg/l (4 h)
Toxicity (others): LD50 intra peritoneal mouse 500
mg/kg Buffer W1
Guanidine Hydrochloride
Oral toxicity: LD50 rat 475 mg/kg
Toxicity (inhalation): LD50 rat 5.3 mg/l (4 h)
Toxicity (others): LD50 intra peritoneal mouse 500 mg/kg

Acute toxicity:
Primary irritant effect:
On the skin: irritant to skin and mucous membranes.
On the eye: irritating effect.
Sensitization: No sensitizing effects known.

12. ECOLOGICAL INFORMATION

Water hazard class: 2 (hazardous to water and ground)

13. DISPOSAL CONSIDERATIONS

Waste disposal route: Used reagent can be disposed in accordance with local regulations.
Disposal of empty packaging: Dispose of empty packs by local recycling or waste disposal routes. Clean thoroughly prior to disposal.

14. TRANSPORT INFORMATION

DOT regulations:
Hazard class: -
Land transport ADR/RID (cross-border):
ADR/RID class: -
Maritime transport IMDG:
IMDG Class: -
Marine pollutant: No
Air transport ICAO-TI and IATA-DGR
ICAO/IATA Class: -

15. REGULATORY INFORMATION

SARA (Superfund and Reauthorization Act)
Section 355 (extremely hazardous substances): None of the ingredients are listed.
Section 313 (Specific toxic chemical listings): None of the ingredients are listed.
TSCA (Toxic Substances Control Act): All ingredients are listed.
Proposition 65
Chemicals known to cause cancer: None of the ingredients are listed.
Chemicals known to cause reproductive toxicity: None of the ingredients are listed.

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. PureDireX (Bio-Helix) shall not be held liable for any damage resulting from handling or from contact with the above product.