Material Safety Data Sheet

Total RNA Isolation Kit (Plant)

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

Preparation Name: Total RNA Isolation Kit (Plant)
Catalogue number of the product: SN020-0100, SN020-0004
Use of the preparation:
For laboratory use.
Company identification:
Simply Biologics, Inc.
Website: www.simplybiologics.com

2. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredients:
Edetic Acid; CAS-No. 6381-92-6
Guanidine Thiocyanate; CAS-No. 593-84-0
Sodium Dodecyl Sulphate; CAS-No. 151-21-3
Guanidine Hydrochloride; CAS-No. 50-01-1
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

Edetic Acid:
Warning! Causes respiratory tract irritation. Causes eye and skin irritation. May cause kidney damage. May cause reproductive and fetal effects.
Target Organs: Kidneys, eyes, skin.
Potential Health Effects
Eye: Causes eye irritation. Causes redness and pain.
Skin: Causes skin irritation. Causes redness and pain.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Ingestion of large amounts can cause hypocalcemic tetany due to formation of calcium complexes. Exposure may cause kidney injury, muscle cramps, bone-marrow depression, and a generalized allergic reaction. Ingestion of large quantities may cause appreciable systemic toxicity involving blood chemistry changes due to chelation properties.
Inhalation: Causes irritation of the mucous membrane and upper respiratory tract.
Chronic: May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects.
Chronic exposure may cause kidney damage.
Guanidine Thiocyanate:
WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.
Health Rating: 2 - Moderate (Life)
Flammability Rating: 1 - Slight
Reactivity Rating: 1 - Slight
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:
May cause psychosis, vomiting, disorientation, weakness, low blood pressure, convulsions and death which may be delayed. The probable lethal dose is between 15-30 grams.
Skin Contact:
Causes irritation to skin. Symptoms include redness, itching, and pain.
Eye Contact:
Causes irritation, redness, and pain.
Chronic Exposure:
Prolonged or repeated skin exposure may cause dermatitis. Repeated ingestion of small amounts may cause weakness, confusion, central nervous system effects, nausea and skin eruptions.
Sodium Dodecyl Sulphate:
WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN OR RESPIRATORY REACTION. FLAMMABLE SOLID.
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

Edetic Acid:
Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.
Guanidine Thiocyanate:
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.
Skin Contact:
Wipe off excess material from skin then 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.
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
GR Reagent
Form: liquid
Miscibility with water: immiscible

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

Edetic Acid
Oral toxicity: LD50 rat 2.000 mg/kg
Toxicity (others): LD50 oral rabbit 2.300 mg/kg
LD50 (intravenous, mouse) 56 mg/kg
Guanidine Thiocyanate
Toxicity (others): ORL-RAT LD50 593 mg kg-1
IPR-MUS LD50 300 mg kg-1
Sodium Dodecyl Sulphate
Oral toxicity: LD50 rat 1.288 mg/kg
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
Primary irritant effect:
On the skin: irritant to skin and mucous membranes.
On the eye: irritating effect.

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. Simply Biologics, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.