


## SAFETY DATA SHEET (SDS)

<b>Product Name:</b> <b>Catalog Number:</b> <b>Product ID Number (CAS #)</b> <b>Intended use of the product:</b> <b>ZeptoMetrix LLC</b> 878 Main Street Buffalo, New York 14202 USA Phone: (716) 882-0920 Fax: (716) 882-0959 Emergency telephone number:	HIV Type 1 p24 Extended Range Kit 0801137 No Data Available For research or further manufacturing only.  (716) 882-0920 or 1 (800) 274-5487 (US Toll Free) Monday-Friday 8:15 am- 4:45 pm EST
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Component Number	Component Description	Hazard Identifications
0702037	HIV-1 p24 Antigen Extended Range Standard	None
1001159	Substrate Tablets (o-Phenylenediamine dihydrochloride & urea-hydrogen peroxide)	

## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** HIV-1 p24 Antigen Extended Range Standard

**Product Code:** 0702037 (Part of 0801137)

### 1.2. Intended Use of the Product

**Use of the Substance/Mixture:** For research use only – Component of the following kits: HIV Type 1 p24 Extended Range Kit (5 x 96 Determinations)

### 1.3. Name, Address, and Telephone of the Responsible Party

#### Company

ZeptoMetrix LLC  
878 Main Street  
Buffalo, NY 14202  
1-800-274-5487

### 1.4. Emergency Telephone Number

Emergency Number : INFOTRAC:  
(US) 1-800-535-5053  
(Outside US) 1-352-323-3500

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

#### GHS-US Classification

Not classified

### 2.2. Label Elements

#### GHS-US Labeling

No labeling applicable according to 29 CFR 1910.1200.

### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Synonyms	Product Identifier	%*	GHS US classification
Sucrose	.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl / Saccharose / Sugar / SUCROSE / D-(+)-Sucrose / .beta.-D-Fructofuranosyl .alpha.-D-glucopyranoside / D-(+)-Saccharose / Sacarose / sucrose / Sugar distillate	(CAS-No.) 57-50-1	5-10	Comb. Dust

\* - Full text of H-phrases: see section 16. The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First-aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

**First-aid Measures After Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**First-aid Measures After Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**First-aid Measures After Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

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## 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**Symptoms/Injuries:** Not expected to present a significant hazard under anticipated conditions of normal use.

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** May cause slight irritation to eyes.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** No additional information available

## 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Not flammable. Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** None known.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Product is not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** None under normal conditions. Under fire conditions, oxides of carbon, phosphorous, nitrogen and alkali metals may be produced.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray). If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

#### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Material may be biologically contaminated with pathogenic organisms.

**Precautions for Safe Handling:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers.

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## 7.3. Specific End Use(s)

For research use only

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Sucrose (57-50-1)		
USA ACGIH	ACGIH OEL TWA	10 mg/m <sup>3</sup>
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA)	10 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable dust)
USA OSHA	OSHA PEL (TWA) [1]	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)

### 8.2. Exposure Controls

Appropriate Engineering Controls

: Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment

: Gloves. Protective clothing. Safety glasses.



Materials for Protective Clothing

: Chemically resistant materials and fabrics.

Hand Protection

: Wear protective gloves.

Eye and Face Protection

: Chemical safety goggles or safety glasses with side shields.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

: When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: No data available
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
<b>Flammability (solid, gas)</b>	: Not applicable
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
<b>Solubility</b>	: No data available
<b>Partition Coefficient: N-Octanol/Water</b>	: No data available
<b>Viscosity</b>	: No data available

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## 9.2. Other Information

No additional information available

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Hazardous reactions will not occur under normal conditions.

### 10.2. Chemical Stability

Stable under recommended handling and storage conditions (see section 7).

### 10.3. Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to Avoid

Direct sunlight, extremely high or low temperatures, and incompatible materials.

### 10.5. Incompatible Materials

Strong acids, strong bases, strong oxidizers.

### 10.6. Hazardous Decomposition Products

None under normal conditions. Under fire conditions, oxides of carbon, phosphorous, nitrogen and alkali metals may be produced.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects

**Acute Toxicity (Oral):** Not classified

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

<b>Sucrose (57-50-1)</b>	
LD50 Oral Rat	29700 mg/kg

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** May cause slight irritation to eyes.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General** : Not classified.

### 12.2. Persistence and Degradability

<b>HIV-1 p24 Antigen Extended Range Standard</b>	
<b>Persistence and Degradability</b>	Not established.

### 12.3. Bioaccumulative Potential

<b>HIV-1 p24 Antigen Extended Range Standard</b>	
<b>Bioaccumulative Potential</b>	Not expected to bioaccumulate.

### 12.4. Mobility in Soil

<b>HIV-1 p24 Antigen Extended Range Standard</b>	
<b>Ecology - Soil</b>	Leaches if exposed to water.

### 12.5. Other Adverse Effects

**Other Adverse Effects** : None known.

**Other Information** : Avoid release to the environment.

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## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste Treatment Methods

**Waste Treatment Methods:** Can be landfilled or incinerated, when in compliance with local regulations.

**Sewage Disposal Recommendations:** Do not dispose of waste into sewer.

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, and international regulations.

**Additional Information:** Biologically contaminated materials should be incinerated.

**Ecology - Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

### 14.1. In Accordance with DOT

Not regulated for transport

### 14.2. In Accordance with IMDG

Not regulated for transport

### 14.3. In Accordance with IATA

Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

### 15.1. US Federal Regulations

#### Sucrose (57-50-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

### 15.2. US State Regulations

#### Sucrose (57-50-1)

U.S. - Pennsylvania - RTK (Right to Know) List

U.S. - Massachusetts - Right To Know List

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Preparation or Latest Revision** : 10/05/2022 Rev: 00

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

### GHS Full Text Phrases:

Comb. Dust	Combustible Dust
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### DISCLAIMER

The information, data and any recommendations contained herein ("Information") is based upon available information believed by ZeptoMetrix LLC to be reliable, however ZEPTOMETRIX neither warrants or assumes any liability for the accuracy or completeness of the Information. ZEPTOMETRIX MAKES NO REPRESENTATION OR WARRANTY, EITHER EXPRESS OR IMPLIED (INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) WITH REGARD TO THE MATERIALS OR INFORMATION DESCRIBED HEREIN, THAT THE MATERIALS WILL NOT POSE A SAFETY OR HEALTH RISK, OR THAT THE MATERIALS WILL ACCOMPLISH ANY PARTICULAR RESULT.

All materials and mixtures may present unknown hazards and should be handled and used with caution. When necessary or appropriate, independent opinion regarding the risk of handling or exposure should be obtained from trained professionals.

SDS US (GHS HazCom)

## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** SIGMAFAST OPD tablet set (50ea/pk) (1ea = 1 gold + 1 silver)

**Product Code:** 1001159 (Part of 0801137)

### 1.2. Intended Use of the Product

**Use of the Substance/Mixture:** For research use only – Component of the following kits: HIV Type 1 p24 Extended Range Kit (5 x 96 Determinations)

### 1.3. Name, Address, and Telephone of the Responsible Party

#### Company

ZeptoMetrix LLC  
878 Main Street  
Buffalo, NY 14202  
1-800-274-5487

### 1.4. Emergency Telephone Number

Emergency Number : INFOTRAC:  
(US) 1-800-535-5053  
(Outside US) 1-352-323-3500

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

#### GHS-US Classification

Eye Irrit. 2A	H319
Skin Sens. 1	H317
Muta. 2	H341
Carc. 2	H351
Aquatic Acute 2	H401
Aquatic Chronic 2	H411
Comb. Dust	

Full text of hazard classes and H-statements : see section 16

### 2.2. Label Elements

#### GHS-US Labeling

Hazard Pictograms (GHS-US) :



Signal Word (GHS-US) :

Hazard Statements (GHS-US) :

Precautionary Statements (GHS-US) :

: Warning

: May form combustible dust concentrations in air.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H341 - Suspected of causing genetic defects.  
H351 - Suspected of causing cancer.  
H401 - Toxic to aquatic life.  
H411 - Toxic to aquatic life with long lasting effects.

: P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P261 - Avoid breathing dust.  
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves, protective clothing, and eye protection.  
P302+P352 - If on skin: Wash with plenty of soap and water.  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P308+P313 - If exposed or concerned: Get medical advice/attention.  
P321 - Specific treatment (see section 4 on this SDS).  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P363 - Wash contaminated clothing before reuse.  
P391 - Collect spillage.  
P405 - Store locked up.  
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

### Supplemental Information

: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Proper grounding procedures to avoid static electricity should be followed. Prevent dust accumulation (to minimize explosion hazard). Avoid generating dust.

### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Synonyms	Product Identifier	%*	GHS US classification
Citric acid	Citric acid, anhydrous / 2-Hydroxy-1,2,3-propanetricarboxylic acid / 1,2,3-Propanetricarboxylic acid, 2-hydroxy- / CITRIC ACID / 2-Hydroxypropane-1,2,3-tricarboxylic acid / anhydrous citric acid / Anhydrous citric acid	(CAS-No.) 77-92-9	30 – 60	Eye Irrit. 2A, H319 STOT SE 3, H335 Comb. Dust
1,2-Benzenediamine, dihydrochloride	1,2-Phenylenediamine dihydrochloride / 1,2-Benzenediamine, hydrochloride (1:2) / 1,2-Benzenediamine dihydrochloride / ortho-Toluenediamine dihydrochloride / 1,2-phenylenediamine dihydrochloride / Benzene-1,2-diamine dihydrochloride / o-Phenylenediamine dihydrochloride	(CAS-No.) 615-28-1	5 – 10	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Urea, compound with hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> ) (1:1)	Urea peroxide / Carbamide peroxide / Percarbamide / Urea hydrogen peroxide / Urea, compound with hydrogen peroxide / Urea, compound with hydrogen peroxide (1:1) / Hydrogen peroxide-urea / UREA PEROXIDE / Carbonyl diamide hydroperoxide	(CAS-No.) 124-43-6	1 – 5	Ox. Sol. 3, H272 Skin Irrit. 2, H315 Eye Dam. 1, H318

\* - Full text of H-phrases: see section 16. The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First-aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.



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**First-aid Measures After Inhalation:** Using proper respiratory protection, move the exposed person to fresh air at once. Encourage exposed person to cough, spit out, and blow nose to remove dust, then rinse mouth and surrounding area with water. If required, provide oxygen or artificial respiration. Call a doctor or Poison Control Center for severe or persistent respiratory symptoms.

**First-aid Measures After Skin Contact:** Remove contaminated clothing. Wash affected area with soap and water for at least 15 minutes. Obtain medical attention if irritation/rash develops or persists.

**First-aid Measures After Eye Contact:** Immediately rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**First-aid Measures After Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**Symptoms/Injuries:** Skin sensitization. Causes serious eye irritation. Suspected of causing genetic defects. Suspected of causing cancer.

**Symptoms/Injuries After Inhalation:** Dust may be harmful or cause irritation.

**Symptoms/Injuries After Skin Contact:** May cause an allergic skin reaction.

**Symptoms/Injuries After Eye Contact:** Contact causes severe irritation with redness and swelling of the conjunctiva.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** Suspected of causing genetic defects. Suspected of causing cancer. Skin sensitization.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** None known.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Combustible Dust.

**Explosion Hazard:** Product is not a dust as supplied; however, product dusts may be combustible.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Oxides and compounds of carbon, nitrogen, sulfur, and chlorine.

**Other Information:** Do not allow run-off from fire fighting to enter drains or water courses.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Do not get in eyes, on skin, or on clothing. Do not breathe dust. Avoid generating dust. Remove ignition sources. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. If product is biologically contaminated, follow all institutional protocols concerning the potential release of pathogens.

#### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.

### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. Avoid generation of dust during clean-up of spills.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Use only non-sparking tools. Use explosion proof vacuum during cleanup, with appropriate filter. Do not mix with other materials. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

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## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Accumulation and dispersion of dust with an ignition source can cause a combustible dust explosion. Keep dust levels to a minimum and follow applicable regulations. Material may be biologically contaminated with pathogenic organisms.

**Precautions for Safe Handling:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Obtain special instructions before use. Do not breathe dust. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Avoid creating or spreading dust. Keep away from heat, sparks, open flames, and hot surfaces. No smoking.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations. Avoid creating or spreading dust. Proper grounding procedures to avoid static electricity should be followed.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers.

### 7.3. Specific End Use(s)

For research use only

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

### 8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. Power equipment should be equipped with proper dust collection devices. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Personal Protective Equipment

: Gloves. Protective clothing. Safety glasses. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: Chemically resistant materials and fabrics.

Hand Protection

: Wear protective gloves.

Eye and Face Protection

: Chemical safety goggles or safety glasses with side shields.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

: When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Tablet
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available

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Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
<b>Flammability (solid, gas)</b>	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
<b>Solubility</b>	: No data available
<b>Partition Coefficient: N-Octanol/Water</b>	: No data available
<b>Viscosity</b>	: No data available

### 9.2. Other Information

No additional information available

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Hazardous reactions will not occur under normal conditions.

### 10.2. Chemical Stability

Stable under recommended handling and storage conditions (see section 7).

### 10.3. Possibility of Hazardous Reactions

Hazardous polymerization will not occur. Product is not a dust as supplied; however, product dusts may be combustible.

### 10.4. Conditions to Avoid

Direct sunlight, extremely high or low temperatures, and incompatible materials. Sparks, heat, open flame and other sources of ignition. Dust accumulation (to minimize explosion hazard).

### 10.5. Incompatible Materials

Strong acids, strong bases, strong oxidizers.

### 10.6. Hazardous Decomposition Products

Thermal decomposition may produce: Oxides and compounds of carbon, nitrogen, sulfur, and chlorine.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects

**Acute Toxicity (Oral):** Not classified

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

Citric acid (77-92-9)	
LD50 Oral Rat	5400 mg/kg
LD50 Dermal Rat	> 2000 mg/kg
1,2-Benzenediamine, dihydrochloride (615-28-1)	
LD50 Oral Rat	900 – 2200 mg/kg
LD50 Dermal Rabbit	1500 mg/kg (Male)
LC50 Inhalation Rat	3.6 mg/l/4h
ATE (Oral)	900.00 mg/kg body weight

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Causes serious eye irritation.

**Respiratory or Skin Sensitization:** May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** Suspected of causing genetic defects.

**Carcinogenicity:** Suspected of causing cancer.

1,2-Benzenediamine, dihydrochloride (615-28-1)	
IARC group	2B
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified.

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

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**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Dust may be harmful or cause irritation.

**Symptoms/Injuries After Skin Contact:** May cause an allergic skin reaction.

**Symptoms/Injuries After Eye Contact:** Contact causes severe irritation with redness and swelling of the conjunctiva.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** Suspected of causing genetic defects. Suspected of causing cancer. Skin sensitization.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General** : Toxic to aquatic life with long lasting effects.

<b>Citric acid (77-92-9)</b>	
LC50 Fish 1	1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)
<b>1,2-Benzenediamine, dihydrochloride (615-28-1)</b>	
LC50 Fish 1	4.6 mg/l
ErC50 (Algae)	0.821 mg/l
NOEC Chronic Crustacea	0.083 mg/l

### 12.2. Persistence and Degradability

<b>SIGMAFAST OPD tablet set (50ea/pk) (1ea = 1 gold + 1 silver)</b>	
Persistence and Degradability	May cause long-term adverse effects in the environment.
<b>Citric acid (77-92-9)</b>	
Persistence and Degradability	Readily biodegradable in water.

### 12.3. Bioaccumulative Potential

<b>SIGMAFAST OPD tablet set (50ea/pk) (1ea = 1 gold + 1 silver)</b>	
Bioaccumulative Potential	Not established.
<b>Citric acid (77-92-9)</b>	
Partition coefficient n-octanol/water (Log Pow)	-1.72 (at 20 °C)

### 12.4. Mobility in Soil

<b>SIGMAFAST OPD tablet set (50ea/pk) (1ea = 1 gold + 1 silver)</b>	
Ecology - Soil	Leaches if exposed to water.

### 12.5. Other Adverse Effects

**Other Adverse Effects** : None known.

**Other Information** : Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste Treatment Methods

**Waste Treatment Methods:** Can be landfilled or incinerated, when in compliance with local regulations. Incineration is the preferred method for disposal of waste product.

**Sewage Disposal Recommendations:** Do not dispose of waste into sewer.

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, and international regulations.

**Additional Information:** Container may remain hazardous when empty. Continue to observe all precautions. Biologically contaminated materials should be incinerated.

**Ecology - Waste Materials:** Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

### 14.1. In Accordance with DOT

Proper Shipping Name : CHEMICAL KITS  
Hazard Class : 9  
Identification Number : UN3316  
Label Codes : 9  
Packing Group : III  
Marine Pollutant : Marine pollutant  
ERG Number : 171



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## 14.2. In Accordance with IMDG

Proper Shipping Name : CHEMICAL KIT  
 Hazard Class : 9  
**Identification Number** : UN3316  
 Label Codes : 9  
 EmS-No. (Fire) : F-A  
 EmS-No. (Spillage) : S-P  
**Marine Pollutant** : Marine pollutant



## 14.3. In Accordance with IATA

Proper Shipping Name : CHEMICAL KIT  
**Identification Number** : UN3316  
 Hazard Class : 9  
 Label Codes : 9  
 ERG Code (IATA) : 9L



## SECTION 15: REGULATORY INFORMATION

### 15.1. US Federal Regulations

<b>SIGMAFAST OPD tablet set (50ea/pk) (1ea = 1 gold + 1 silver)</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Health hazard - Respiratory or skin sensitization Health hazard - Serious eye damage or eye irritation Health hazard - Germ cell mutagenicity Health hazard - Carcinogenicity Physical hazard - Combustible dust
<b>Citric acid (77-92-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
<b>1,2-Benzenediamine, dihydrochloride (615-28-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
<b>SARA Section 313 - Emission Reporting</b>	1 %
<b>Urea, compound with hydrogen peroxide (H2O2) (1:1) (124-43-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	

### 15.2. US State Regulations

<b>1,2-Benzenediamine, dihydrochloride (615-28-1)</b>	
U.S. - New Jersey - Right to Know Hazardous Substance List	
<b>Urea, compound with hydrogen peroxide (H2O2) (1:1) (124-43-6)</b>	
U.S. - New Jersey - Right to Know Hazardous Substance List	

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Preparation or Latest Revision** : 10/05/2022 Rev: 00  
**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

### GHS Full Text Phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2

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Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Carc. 2	Carcinogenicity Category 2
Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Muta. 2	Germ cell mutagenicity Category 2
Ox. Sol. 3	Oxidizing solids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

DISCLAIMER

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SDS US (GHS HazCom)