

MATERIAL SAFETY DATA SHEET

AccuPrep™ Plasmid Extraction Kit
AccuPrep™ Genomic DNA Extraction Kits
AccuPrep™ Viral RNA Extraction Kits
AccuPrep™ Gel Purification Kits
AccuPrep™ GMO DNA Extraction Kits
AccuPrep™ PCR Purification Kits
AccuPrep™ Stool DNA Extraction Kits
DNA PrepMate™
DNA PrepMate™-M
Viral RNA PrepMate™
Blood RNA PrepMate™
Tissue RNA PrepMate™

Section 1 – Safety Data for EDTA (Ethylenediaminetetraacetic Acid)

Composition / Information on Ingredients

CAS #: 60-00-4

MF: C10H16N2O8

EC NO: 200-449-4

Do not contain any animal products.

Hazards Identification

Label precautionary statements

Irritant

Irritating to eyes, respiratory system and skin

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

First Aid Measures

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

In case of contact, immediately wash skin with soap and copious amounts of water.

If inhaled, remove to fresh air. If not breathing give artificial respiration.

If breathing is difficult, give oxygen.

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Wash contaminated clothing before reuse.

Fire Fighting Measures

Extinguishing Media

Water spray

Carbon dioxide, dry chemical powder or appropriate foam

Special firefighting procedures

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Unusual fire and explosions hazards

Emits toxic fumes under fire conditions

Exposure Controls / Personal Protection

Chemical safety goggles

Compatible chemical-resistant gloves

NIOSH/MSHA-approved respirator

Safety shower and eye bath
 Mechanical exhaust required
 Do not breathe dust
 Avoid contact with eyes, skin, and clothing
 Wash thoroughly after handling
 Irritant
 Keep tightly closed
 Store in a cool dry place

Physical and Chemical Properties

Appearance and odor
 White powder

Stability and Reactivity

Incompatibilities
 Strong oxidizing agents
 Strong bases
 Copper, copper alloys
 Nickel
 Hazardous combustion or decomposition products
 Toxic fumes of:
 Carbon monoxide, carbon dioxide
 Nitrogen oxides

Toxicological Information

Acute effects
 May be harmful by inhalation, ingestion, or skin absorption
 Causes eye and skin irritation
 Material is irritating to mucous membranes and upper respiratory tract.
 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
 RTECS #: AH4025000
 Acetic acid (Ethylenedinitrilo) tetra-
 Toxicity Data
 IPR-RAT LD50:397 MG/KG AHRTAN 13,295,1962
 ORL-MUS LD50:30 MG/KG FCTOD7 29,845,1991
 IPR-MUS LD50:250 MG/KG NTIS** AD691-490
 IVN-MUS LD50:28500 UG/KG JJPAAZ 63,187,1993
 Target Organ Data
 Behavioral (Convulsions or effect on seizure threshold)
 Only selected registry of toxic effects of chemical substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

.....
Section 2– Safety Data for Tris (Trizma Base)

Ingredients / Identity Information

Proprietary: No
 Ingredient: 1,3-propanediol, 2-amino-2-(hydroxymethyl), tromethamine
 Ingredient Sequence Number: 01
 NIOSH (RTECS) Number: TY2900000
 CAS Number: 77-86-1

Physical / Chemical Characteristics

Appearance and odor: White crystals

Boiling point: 426.2-428F

Melting point: (See supp)

Fire and Explosion Hazard Data

Extinguishing Media: Water spray, CO₂, dry chemical powder/appropriate foam.

Special fire fighting proc: Wear scba & protective clothing.

Unusual fire and expl hazard: Emits toxic fumes under fire conditions

Reactivity Data

Stability: Yes

Cond to avoid (Stability): Moisture

Materials to avoid: Bases, oxidizing agents

Hazardous decomp products: Thermal combustion: CO, CO₂, nitrogen oxides.

Hazardous poly occur: No

Health Hazard Data

LD50-LC50 MIXTURE: ORAL LD50(RAT): 5900 MG/KG

Route of entry - Inhalation: Yes

Route of entry - Skin: Yes

Route of entry - Ingestion: Yes

Health has acute and chronic: May be harmful by inhalation, ingestions/skin absorption. Eyes/skin: Irritation.

Inhalation: Irritating to mucous

Membranes & upper respiratory tract

Carcinogenicity - NTP: No

Carcinogenicity - IARC: No

Carcinogenicity - OSHA: No

Explanation carcinogenicity: None

Signs/Symptoms of overexp: Irritation

Emergency/First aid proc: Eyes/skin: Flush w/copious amounts of water for 15 minutes.

Inhalation: Remove to fresh air. Give CPR/oxygen if needed.

Ingestion: Wash out mouth w/water if conscious. Obtain medical attention in all cases

Precautions for Safe Handling and Use

Steps if matl released/spill: Wear respirator, chemical safety goggles, rubber boots & heavy rubber gloves, sweep up, place in a bag & hold for waste disposal.

Avoid raising dust. Ventilate area & wash site after material pick up is complete.

Wasted disposal method: Dissolve/mix W/A combustible solvent & burn in a chemical incinerator equipped W/AN afterburner & scrubber, IAW/federal, state local regulations.

Precautions -Handling/Storing: Store in a cool dry place. Keep tightly closed.

Other precautions: Avoid prolonged/repeated exposure. Avoid contact w/eyes, skin/clothing. Don't breathe dust.

Control Measures

Respiratory protection: Use NIOSH/MSHA approved respirator.

Ventilation: Mechanical exhaust required.

Protective gloves: Compatible chemical resistant

Eye protection: Chemical safety goggles

Other protective equipment: Safety shower & eye bath, protective clothing.

Work hygienic practices: Remove/laundry contaminated clothing & shoes before reuse. Wash thoroughly after handling.

Suppl. safety & health data: Melting point: 340.16-342.14F.

.....

Section 3 – Safety Data for Hydrochloric Acid**Ingredients/Identity Information**

Appearance: Clear colorless or slightly yellow liquid with pungent odour. Fuming.

Melting point: -25 C

Boiling point: 109 C

Specific gravity: 1.19

Vapour Pressure:

Flash point:

Explosion limits:

Autoignition Temperature:

Health Hazard Data

Stable. Avoid heat, flames. Incompatible with most common metals, amines, metal oxides, acetic anhydride, propiolactone, vinyl acetate, mercuric sulphate, calcium phosphide, formaldehyde, alkalies, carbonates, strong bases, sulphuric acid, chlorosulphonic acid.

Toxicology

Extremely corrosive. Inhalation of vapour can cause serious injury. Ingestion may be fatal. Liquid can cause severe damage to skin and eyes. TLV 5 PPM.

Personal Protection

Safety glasses or face mask, gloves. Effective ventilation.

Ingredients/Identity Information

Proprietary: No

Ingredient: Monohydrochloride, guanidinium chloride

Ingredient sequence number: 01

Percent: 99

NIOSH (RTECS) number: MF4300000

CAS number: 50-01-1

Physical/Chemical Characteristics

Appearance and odor: White crystalline powder

Melting point: 365-372.2F

Fire and Explosion Hazard Data

Extinguishing media: Water spray, CO₂, dry chemical powder/appropriate foam.

Special fire fighting proc: Wear scba & protective clothing.

Unusual fire and expl hazards: Emits toxic fumes under fire conditions.

Reactivity Data

Stability: Yes

Cond to avoid (stability): Moisture

Materials to avoid: Strong oxidizing agents

Hazardous decomp products: Combustion: CO, CO₂, nitrogen oxides, hydrogen chloride gas.

Hazardous poly occur: No

Health Hazard Data

LD50-LC50 MIXTURE: ORAL LD50(RAT): 475 MG/KG

Route of entry - Inhalation: Yes

Route of entry – Skin: Yes

Route of entry - Ingestion: Yes

Health has acute and chronic: Harmful if ingested, inhaled/absorbed through skin, causes severe irritation. High concentrations are extremely destructive to tissues of the mucous membranes & upper respiratory tract, eyes & skin. May cause nervous system disturbances & burning.

Carcinogenicity - NTP: No

Carcinogenicity - IARC: No

Carcinogenicity - OSHA: No

Explanation carcinogenicity: None

Signs/Symptoms of overexp: Irritation, burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting.

Emergency/First aid proc: Eyes/skin: Immediately flush w/copious amounts of water for 15 minutes. Inhalation: Remove to fresh air. Give CPR/ oxygen if needed. Ingestion: Wash out mouth w/water if conscious. Obtain medical attention in all cases.

Precautions for Safe Handling and Use

Steps if matl released/spill: Wear SCBA, rubber boots & heavy rubber gloves, sweep up, place in a bag & hold for waste disposal. Avoid raising dust. Ventilate area & wash area after material pickup is complete.

Waste disposal method: Dissolve/mix material w/a combustible solvent & burn in a chemical incinerator equipped w/an afterburner & scrubber, IAW/federal, state & local regulations.

Precautions-Handling/storing: Keep tightly closed. Store in a cool dry place.

Other precautions: Avoid inhalation. Don't get in eyes, skin/clothing.

Avoid prolonged/repeated exposure. Hygroscopic.

Control Measures

Respiratory Protection: Wear appropriate NIOSH/MSHA approved respirator.

Ventilation: Chemical fume hood

Protective gloves: Chemical resistant

Eye protection: Safety goggles/faceshield (8 inch min)

Other protective equipment: Protective clothing, safety shower & eye bath.

Section 4 – Safety Data for SDS (Lauryl Sulfate)

Composition/Information on Ingredients

CAS #: 151-21-3

EC NO: 205-788-1

Hazards Identification

Label precautionary statements

Toxic (USA)

Harmful (EU)

Harmful by inhalation and if swallowed.

May cause sensitization by inhalation.

Irritating to eyes, respiratory system and skin.

Risk of serious damage to eyes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing.

Do not breathe vapor.

First Aid Measures

In case of contact, immediately flush eyes or skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes.

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Assure adequate flushing of the eyes by separating the eyelids with fingers.

.....

Section 5 – Safety Data for Potassium Acetate

Composition/Information on Ingredients

CAS #: 127-08-2

MF: C₂H₃KO₂

EC NO: 204-822-2

Synonyms

Diuretic salt * octan draselny (Czech) * Potassium Acetate *

Hazards Identification

Label precautionary statements

Irritant

Irritating to eyes, respiratory system and skin.

In case of contact with eyes, rinse immediately with plenty of water and seek advice. Wear suitable protective clothing.

First Aid Measures

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

If inhaled, remove to fresh air. If not breathing give artificial respiration.

If breathing is difficult, give oxygen.

In case of contact, immediately wash skin with soap and copious amounts of water.

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Fire fighting Measures

Extinguishing media

Water spray

Carbon dioxide, dry chemical powder or appropriate foam

Special firefighting procedures

Wear self – contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Unusual fire and explosions hazards

Emits toxic fumes under fire conditions

Exposure Controls/Personal Protection

Safety shower and eye bath

Mechanical exhaust required

Wash thoroughly after handling

Do not breathe dust

Avoid contact with eyes, skin and clothing

Avoid prolonged or repeated exposure

NIOSH/MSHA-approved respirator

Compatible chemical – resistant gloves

Chemical safety goggles

Keep tightly closed

Store in a cool dry place

Toxicological Information

Acute effects

Causes skin irritation

Causes eye irritation

Material is irritating to mucous membranes and upper respiratory tract

May be harmful by inhalation, ingestion, or skin absorption

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

RTECS #: AJ3325000

Acetic Acid, potassium salt

Toxicity data

ORL-RAT LD50:3250 MG/KG

AIHAAP 30,470,1969

Only selected registry of toxic effects of chemical substances (RTECS) data is presented here. See actual entry is RTECS for complete information.

Section 6 – Safety Data for Acetic Acid, Glacial Composition/Information on Ingredients

CAS #: 64-19-7

MF: C2H4O2

EC NO: 200-580-7

Synonyms

Acetic Acid (ACGIH:OSHA) * Acetic Acid, glacial * Acide Acetique (French) * Acido Acetico (Italian) * Azijnzuur (Dutch) * Essigsaeure (German) * Ethanoic Acid * Ethylic Acid * Glacial Acetic Acid * Kyselina Octova (Czech) * Methanecarboxylic Acid * Octowy Kwas (Polish) * Vinegar Acid *

Hazards Identification

Label precautionary statements

Combustible (USA)

Flammable (EU)

Corrosive

Causes severe burns

Harmful in contact with skin

Lachrymator

Target organ(s):

Teeth

Kidneys

Keep away from sources of ignition – No smoking

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing, gloves and eye/face protection

First Aid Measures

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

If inhaled, remove to fresh air. If not breathing give artificial respiration.

If breathing is difficult, give oxygen.

In case of skin contact, flush with copious amounts of water for at least 15 minutes.

Remove contaminated clothing and shoes. Call a physician.

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 7– Safety Data for RNase (Ribonuclease A) Composition/Information on Ingredients

CAS #: 9001-99-4
EC NO: 232-646-6

Hazards Identification

Label precautionary statements

Caution:

Avoid contact and inhalation.

First Aid Measures

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

If inhaled, remove to fresh air.

If breathing becomes difficult, call a physician.

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes, call a physician.

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Fire Fighting Measures

Extinguishing media

Noncombustible

Use extinguishing media appropriate to surrounding fire conditions

Special firefighting procedures

Wear self – contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Unusual fire and explosions hazards

Emits toxic fumes under fire conditions

Exposure Controls/Personal Protection

NIOSH/MSHA-Approved respirator

Compatible chemical – Resistant gloves

Chemical safety goggles

Safety shower and eye bath

Mechanical exhaust required

Avoid inhalation

Avoid contact with eyes, skin and clothing

Avoid prolonged or repeated exposure

Wash thoroughly after handling

Keep tightly closed

Store in a cool DR