

[SDS]

Acid Phosphatase, Kinetic

1268 N. Lakeview Ave. Anaheim, CA 92807 Phone: (714) 463-1111 Fax: (714) 463-1169 www.tecodiagnostics.com


Section 1 – Identification

Product Name	Acid Phosphatase, Kinetic	Emergency Telephone No.
Catalog Numbers	A591-60	CHEMTREC (800) 424-9300
Product Type	Clinical Chemistry Reagent	International CHEMTREC (703) 527-3887
Company Name	Teco Diagnostics	Company Telephone No.
Street Address	1268 N. Lakeview Avenue	(800) 222-9880 or (714) 463-1111 Monday - Friday 8:00-4:30 PST
City, State, Zip Code, Country	Anaheim, CA 92807 USA	Fax No. (714) 463-1169
Recommended Use: For <i>in vitro</i> diagnostic use only. For professional use only.		
Restrictions on Use: Not for <i>in vivo</i> use.		



Section 2 – Hazard(s) Identification**Classification**

Component	Classification
L-Tartrate Reagent: (Hazardous component: Citric Acid)	This material is classified as hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and UN GHS. Eye irritation (Category 2A), H319
Acetate Buffer: (Hazardous component: Acetic Acid)	This material is classified as hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and UN GHS. Flammable liquids (Category 3), H226, Skin corrosion (Category 1A), H314, Serious eye damage (Category 1), H318

Hazardous Components

Component	GHS Label elements, including precautionary statements	
Citric Acid (Component of L-Tartrate Reagent)	Pictogram Hazard Symbol	
	Signal Word	Warning
	Hazard Statements	H319 Causes serious eye irritation.
	Precautionary Statements	P264 Wash skin thoroughly after handling P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/attention.

Hazards not Otherwise classified (HNOC): None

Component	GHS Label elements, including precautionary statements	
Acetic Acid (Component of Acetate Buffer)	Pictogram Hazard Symbol	 
	Signal Word	Danger
	Hazard Statements	H226 Flammable liquid and vapor. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.
	Precautionary Statements	P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. 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.

[SDS]

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P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position 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/doctor.
 P363 Wash contaminated clothing before reuse.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
 P403 + P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
 P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not Otherwise classified (HNOC): Lachrymator**Section 3 – Composition/Information on Ingredients**

Component	Type	Chemical Concentration or % (Based on dried weight at time of impregnation)	CAS#
Acid phosphatase reagent:	Mixture	3 mM α -Naphthylphosphate 60 mM Sodium Citrate	81012-89-7 6132-04-3
L-Tartrate Reagent:	Mixture	2 M Sodium L-Tartrate 70 mM Citric Acid 10 mM Sodium Citrate	6106-24-7 77-92-9 6132-04-3
Acetate Buffer:	Mixture	5 mM Sodium Acetate 5 mM Acetic Acid	127-09-3 64-19-7

Section 4 – First Aid Measures

General Advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin Contact	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

Section 5- Fire-fighting Measures

Extinguishing Media	Suitable: Dry powder. Dry sand. Unsuitable: Do NOT use water jet.
Specific Hazards	No data available.
Special protective equipment and advice for fire-fighters	Wear self-contained breathing apparatus for firefighting if necessary.

Section 6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Avoid breathing dust. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning up	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

[SDS]

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Section 7 – Handling and Storage

Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

Storage

Store at 2-8°C in the original container and protect from sunlight. Keep container tightly closed when not in use.

Section 8 – Exposure Controls / Personal Protection

Components with workplace control parameters

Chemical Name	Value	Control Parameter	Basis
Acetic acid CAS# 64-19-7	TWA	10 ppm	USA. ACGIH Threshold Limit Values (TLV)
	STEL	15 ppm	USA. ACGIH Threshold Limit Values (TLV)
	TWA	10 ppm/ 25 mg/m ³	USA. NIOSH Recommended Exposure Limits
	ST	15 ppm/ 37 mg/m ³	USA. NIOSH Recommended Exposure Limits
	TWA	10 ppm/ 25 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants
	PEL	10 ppm/ 25 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
	STEL	15 ppm/ 37 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
C	40 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)	

Engineering Controls

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

Personal Protective Equipment

Respiratory Protection	Respiratory protective equipment is not required where adequately ventilated.
Hand Protection	Wear chemical-resistant, impervious gloves
Eye Protection	Safety glasses with side shields recommended.
Protective Clothing	Wear a lab coat.
Other protective equipment	Ensure the eyewash station and/or safety shower/wash is located near the work area.

General Hygiene Measures

Handle in accordance with good industrial hygiene practice. After handling the product, remove gloves using proper glove removal technique (without touching outer surface of glove), and dispose gloves according to applicable laws and good laboratory practices. Wash hands thoroughly. Also wash hands before eating, smoking, using the lavatory, and at end of the work period.

Section 9 – Physical and Chemical Properties

Appearance	Acid Phosphatase Reagent: White, Powder L-Tartrate Reagent: White, Powder Acetate Buffer: Clear, Liquid
Odor	N/A
Odor threshold	N/A
pH	N/A
Melting point / freezing point	N/A
Initial boiling point and boiling range	Acetate Buffer: > 100 °C 1,013 mmHg
Flash point	N/A
Evaporation rate	N/A
Flammability	Not flammable
Upper/lower flammability or explosion limits	N/A
Vapor pressure	N/A
Vapor density	N/A
Relative density	N/A
Solubility	Acid phosphatase reagent: Soluble

[SDS]

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	L-Tartrate Reagent: Soluble
	Acetate Buffer: Miscible
Partition coefficient: n-octanol/water	N/A
Auto-ignition Temperature	N/A
Decomposition Temperature	N/A
Viscosity	N/A

Section 10 – Stability and Reactivity

Reactivity	Reacts with serum
Chemical stability	Stable under recommended storage conditions as indicated in section 7.
Possibility of hazardous reactions	No data available
Conditions to avoid	Avoid high temperature, high humidity, moisture
Incompatible materials	Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, e.g. potassium permanganate, Amines, Alcohols, Nitric acid, Bases, Reducing agents, Nitrates
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Oxides of phosphorus, Sodium oxides.

Section 11- Toxicological Information

Route of Entry/Exposure	Skin contact, eye contact
Effects of acute exposure	
Skin contact	May cause irritation.
Eye contact	May cause irritation.
Ingestion	May be harmful if ingested. May irritate mucous membranes and upper respiratory tract.
Inhalation	May cause irritation to mucous membranes and upper respiratory tract.
Effects of chronic exposure	No information available

Toxicity:

Component	Chemical	Acute Toxicity	Chronic Toxicity	Other Information
L-Tartrate Reagent:	Citric Acid	LD50 Oral - Rat - 5,400 mg/kg (OECD Test Guideline 401) LD50 Dermal - Rat - > 2,000 mg/kg (OECD Test Guideline 402)	No information available	RTECS: GE7350000 Vomiting, Diarrhoea, Damage to tooth enamel., Dermatitis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated
Acetate Buffer:	Sodium Acetate	LD50 Oral - Rat - 3,530 mg/kg LC50 Inhalation - Rat - 1 h - > 30,000 mg/m ³ LD50 Dermal - Rabbit - > 10,000 mg/kg	No information available	RTECS: AJ4300010 Abdominal pain, Nausea, Vomiting To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Acetate Buffer:	Acetic acid	LD50 Oral - Rat - 3,310 mg/kg LC50 Inhalation - Mouse - 1 h - 5620 ppm Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye: Conjunctive irritation. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Other. Blood: Other changes. LC50 Inhalation - Rat - 4 h - 11.4 mg/l LD50 Dermal - Rabbit - 1,112 mg/kg	No information available	RTECS: AF1225000 Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Ingestion or inhalation of concentrated acetic acid causes damage to tissues of the respiratory and digestive tracts. Symptoms include: hematemesis, bloody diarrhea, edema and/or perforation of the esophagus and pylorus, pancreatitis, hematuria, anuria, uremia, albuminuria, hemolysis, convulsions, bronchitis, pulmonary edema, pneumonia, cardiovascular collapse,

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shock, and death. Direct contact or exposure to high concentrations of vapor with skin or eyes can cause: erythema, blisters, tissue destruction with slow healing, skin blackening, hyperkeratosis, fissures, corneal erosion, opacification, iritis, conjunctivitis, and possible blindness., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Stomach - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence

Carcinogenicity

IARC No component present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.

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

NTP No component present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.

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

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

Section 12 – Ecological Information

Ecotoxicity

Component	Chemical	Toxicity to fish mortality	Toxicity to daphnia and other aquatic invertebrates
L-Tartrate Reagent	Citric Acid	LC50 - Leuciscus idus melanotus - 440 mg/l – 48 h (OECD Test Guideline 203)	static test - Daphnia magna (Water flea) - 1,535 mg/l - 24 h
Acetate Buffer	Sodium Acetate	LD50 Oral - Rat - 3,530 mg/kg LC50 - Pimephales promelas (fathead minnow) - 13,330 mg/l - 120 h LC50 - Lepomis macrochirus (Bluegill) - 5,000 mg/l - 24 h	EC50 - Daphnia magna (Water flea) - > 1,000 mg/l - 48 h
Acetate Buffer	Acetic acid	semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l -96 h (OECD Test Guideline 203)	EC50 - Daphnia magna (Water flea) - > 300.82 mg/l - 48 h (OECD Test Guideline 202)

Persistence and degradability

No information available

Bio-accumulative potential

No information available

Mobility in soil

No information available

Other adverse effects

No information available

Water hazard class

No information available

Section 13 – Disposal Considerations

Waste residues and methods of disposal

This product has to be disposed in accordance with applicable regional, national and local laws and regulations. Surplus and non-recyclable components should be taken to a licensed waste disposal contractor for disposal.

Contaminated Packaging

Waste packaging should be recycled; however, since empty containers may retain some product residues, they should be taken to an approved waste handling site or given to a licensed waste disposal contractor for recycling or disposal, if recycling is not possible.

Section 14 – Transport Information

Component: Acetate Buffer - Acetic Acid

UN Number	2789
UN Proper shipping name	Acetic acid, glacial

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Transport hazard class	8 (3)
Packing group	II
Environmental hazard	No information available
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable
DOT (USA)	UN number: 2789 Class: 8 (3) Packing group: II Proper shipping name: Acetic acid, glacial Reportable Quantity (RQ): 5000 lbs Poison Inhalation Hazard: No
IMDG	Not dangerous goods. Non-hazardous for maritime transport.
IATA	UN number: 2789 Class: 8 (3) Packing group: II Proper shipping name: Acetic acid, glacial
Special precautions	None

Section 15 – Regulatory Information

United States		
HCS Classification	Not regulated	
U.S Federal Regulations		
TSCA 8(a) CDR Exempt/Partial exemption: Not determined		
United States inventory TSCA 8(b): Not determined		
SARA 302: No components are subject to the reporting requirements of SARA Title III, section 302		
SARA 304 Extremely Hazardous Substances Reportable Quantity: The product does not contain any components with a section 304 EHS RQ.		
SARA 311/312 Hazards Identification: Not regulated		
Clean Water Act (CWA) 307: This product does not contain any toxic pollutants listed under the U.S. Clean Water Act section 307.		
Clean Water Act (CWA) 311: This product does not contain any hazardous substances listed under the U.S. Clean Water Act section 311.		
Clean Air Act (CAA) 112 accidental release prevention: No products were found		
Canada WHMIS: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.		
U.S. State Regulations	Component	CAS No.
Pennsylvania Right to Know:	Disodium tartrate dihydrate	6106-24-7
	α-Naphthyl acid phosphate, monosodium salt monohydrate	81012-89-7
	Sodium acetate	127-09-3
	Acetic acid	64-19-7
	CITRIC ACID TRISODIUM SALT Dihydrate	6132-04-3
	Citric acid	77-92-9
New Jersey Right to Know:	Disodium tartrate dihydrate	6106-24-7
	α-Naphthyl acid phosphate, monosodium salt monohydrate	81012-89-7
	Sodium acetate	127-09-3
	Acetic acid	64-19-7
	CITRIC ACID TRISODIUM SALT Dihydrate	6132-04-3
	Citric acid	77-92-9
California Prop. 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	

Section 16 – Other Information

This product is labeled in accordance with CFR21 (Food and Drugs), Section 809.10.

The information contained herein has been compiled from data presented in various technical sources believed to be accurate.

We make no warranties, express or implied, and assume no liability in connection with the use of this information.

It is the user's responsibility to determine the suitability of this information and to assure the adoption of necessary safety precautions.

N/A = Not Applicable or Not Available

Date of SDS Preparation: 01/29/2019