

Document	QL801-007
Revision	B
Prepared by	Payal Maheshwari
Approved by	Jenifer Ohta
Issue date	05/18/2016

[SDS] **ALT (SGPT) Color**

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

### Section 1 – Identification

<b>Product Name</b>	<b>ALT (SGPT) Color</b>	<b>Emergency Telephone No.</b>
<b>Catalog Numbers</b>	A526-120	CHEMTREC (800) 424-9300
<b>Product Type</b>	Clinical Chemistry Reagent	International CHEMTREC (703) 527-3887
<b>Company Name</b>	Teco Diagnostics	<b>Company Telephone No.</b>
<b>Street Address</b>	1268 N. Lakeview Avenue	(800) 222-9880 or (714) 463-1111 Monday - Friday 8:00-4:30 PT
<b>City, State, Zip Code, Country</b>	Anaheim, CA 92807 USA	Fax No. (714) 463-1169

**Recommended Use:** For *in vitro* diagnostic use only. For professional use only.

**Restrictions on Use:** Not for *in vivo* use.

### Section 2 – Hazard(s) Identification

#### Classification

Component	Classification
ALT Substrate	This material is not classified as hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200).
ALT Color Reagent (1 N Hydrochloric acid)	This material is considered hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). Corrosive to metals, Category 1; Skin irritation Category 2; Serious eye damage/eye irritation Category 1
ALT Color Developer (0.5 N Sodium hydroxide)	This material is considered hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200). Corrosive to metals, category 1; Skin irritation Category 2; Eye irritation Category 2A
ALT Calibrator	This material is not classified as hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

#### Hazardous Components

Component	GHS Label elements, including precautionary statements	
1 N Hydrochloric acid (component of ALT Color Reagent)	Pictogram	
	Hazard Symbol	
	Signal word	Warning
	Hazard statements	May be corrosive to metals. Causes skin irritation. Causes serious eye damage.
Precautionary statements	Keep only in original container. Wear eye/face protection. Wear protective gloves. Wash skin thoroughly after handling. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention. 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 or doctor/physician. Absorb spillage to prevent material damage. Store in corrosive resistant container with a resistant liner.	

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## Section 2 – Hazard(s) Identification (Continued)

### Hazardous Components

Component	GHS Label elements, including precautionary statements	
0.5 N Sodium hydroxide (component of ALT Color Developer)	Pictogram Hazard Symbol	
	Signal word	Warning
	Hazard statements	May be corrosive to metals. Causes skin irritation. Causes serious eye irritation.
	Precautionary statements	Keep only in original container. Wear eye/face protection. Wear protective gloves. Wash skin thoroughly after handling. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation occurs: Get medical advice/attention.

**Hazards not otherwise classified (HNOC)** None identified

## Section 3 – Composition/Information on Ingredients

Component	Type	Chemical Concentration	CAS#
ALT Substrate	Mixture	0.2 M L-alanine 2.0 mM $\alpha$ -ketoglutarate 100 mM phosphate buffer	56-41-7 305-72-6 7758-11-4
ALT Color Reagent	Mixture	1.0 mM 2,4-dinitrophenylhydrazine 1 N Hydrochloric acid	119-26-6 7647-01-0
ALT Color Developer	Mixture	0.5 N sodium hydroxide	1310-73-2
ALT Calibrator	Mixture	0.04 g/L Sodium pyruvate 100 mM phosphate buffer	113-24-6 7758-11-4

## Section 4 – First Aid Measures

<b>Ingestion</b>	If victim is conscious and alert, wash out their mouth with water, and then give 2 to 4 cups of water. Never give anything by mouth to an unconscious person. Seek medical attention.
<b>Inhalation</b>	Move exposed person to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.
<b>Skin Contact</b>	Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Wash clothing before reuse. Get medical attention if irritation occurs.
<b>Eye Contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if irritation occurs.

## Section 5- Fire-fighting Measures

<b>Extinguishing Media</b> Suitable: Use water spray, foam, or dry chemical. Unsuitable: None known
<b>Specific Hazards</b> Hazardous combustion products: carbon oxides, nitrogen oxides, sodium oxides, hydrogen chloride gas
<b>Special protective equipment and precautions for fire-fighters</b> Wear self-contained breathing apparatus and appropriate protective clothing for firefighting.

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### Section 6 – Accidental Release Measures

#### Personal precautions, protective equipment and emergency procedures

Wear proper personal protective equipment (PPE) as indicated in section 8.  
Exercise appropriate precautions to avoid contact with skin or eyes and prevent inhalation.

#### Methods and materials for containment and cleaning up

Vacuum or sweep material and place into a suitable waste container. Dispose of in accordance with federal, state, and local regulations.

### Section 7 – Handling and Storage

#### Handling

Wear appropriate personal protective equipment (PPE) as indicated in section 8.  
Avoid contact with eyes, skin, and clothing. Avoid inhalation or ingestion.

#### Storage

Store according to the label instructions in the original containers. Keep containers tightly closed when not in use.

### Section 8 – Exposure Controls / Personal Protection

#### Components with workplace control parameters

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrochloric acid	Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7 mg/m <sup>3</sup> (Vacated) Ceiling: 5 ppm (Vacated) Ceiling: 7 mg/m <sup>3</sup>	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m <sup>3</sup>
Sodium hydroxide	Ceiling: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>

Component	Mexico OEL (TWA)	Ontario TWAEV	Quebec
Hydrochloric acid	Peak: 5 ppm Peak: 7 mg/m <sup>3</sup>	CEV: 2 ppm	Ceiling: 5 ppm Ceiling: 7.5 mg/m <sup>3</sup>

#### Engineering Controls

No special ventilation requirements. Good general ventilation is sufficient.

#### Personal Protective Equipment

<b>Respiratory Protection</b>	Respiratory protective equipment is not required where adequately ventilated.
<b>Hand Protection</b>	Wear chemical-resistant, impervious gloves
<b>Eye Protection</b>	Safety glasses with side shields recommended.
<b>Protective Clothing</b>	Wear a lab coat.
<b>Other protective equipment</b>	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

<b>Appearance</b>	ALT Substrate: Clear liquid ALT Color Reagent: Clear liquid ALT Color Developer: Clear liquid ALT Calibrator: Clear liquid
<b>Odor</b>	ALT Substrate: No information available ALT Color Reagent: Pungent ALT Color Developer: No information available ALT Calibrator: No information available
<b>Odor threshold</b>	No information available
<b>pH</b>	ALT Substrate: 7.4 ± 0.05 ALT Color Reagent: No information available ALT Color Developer: No information available ALT Calibrator: 7.4 ± 0.05
<b>Melting point / freezing point</b>	No information available
<b>Initial boiling point and boiling range</b>	No information available
<b>Flash point</b>	No information available

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### Section 9 – Physical and Chemical Properties (Continued)

Evaporation rate	No information available
Flammability	Not flammable
Upper/lower flammability or explosion limits	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	No information available
Solubility	Soluble in water
Partition coefficient: n-octanol/water	No information available
Auto-ignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available

### Section 10 – Stability and Reactivity

Reactivity	Reacts with the test specimen (human serum).
Chemical stability	Stable under recommended storage conditions as indicated in section 7.
Possibility of hazardous reactions	No information available
Conditions to avoid	Avoid high temperature, high humidity conditions
Incompatible materials	Metals, strong oxidizing agents.
Hazardous decomposition products	No information available

### 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.
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
ALT Color Reagent	Hydrochloric Acid	LD50 Oral – rat 238-277 mg/kg LD50 Dermal – rabbit 5010 mg/kg LC50 Inhalation – rat 1.68 mg/L 1h	No information available	No information available
ALT Color Developer	Sodium hydroxide	LD50 Dermal – rabbit 1350 mg/kg	No information available	RTECS: WB4900000

#### Carcinogenicity

IARC	Group 3 Not classifiable as to its carcinogenicity to humans (Hydrochloric Acid)
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No component of this product 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	Hydrochloric acid: Freshwater Fish: 282 mg/L LC50 96 h Sodium hydroxide: Oncorhynchus mykiss (rainbow trout) 45.4 mg/L LC50 96h
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

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### 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

<b>UN Number</b>	None. Not regulated.
<b>UN Proper shipping name</b>	None. Not regulated.
<b>Transport hazard class</b>	Not classified as hazardous. Not regulated.
<b>Packing group</b>	Not applicable
<b>Environmental hazards</b>	No information available
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable
<b>DOT (USA)</b>	Not dangerous goods. Non-hazardous for transport.
<b>IMDG</b>	Not dangerous goods. Non-hazardous for maritime transport.
<b>IATA</b>	Not dangerous goods. Non-hazardous for air transport.
<b>Special precautions</b>	None

### Section 15 – Regulatory Information

<b>United States</b>	
<b>HCS Classification</b>	Not regulated
<b>U.S Federal Regulations</b>	
<b>TSCA 8(a) CDR Exempt/Partial exemption:</b> Not determined	
<b>United States inventory TSCA 8(b):</b> Not determined	
<b>SARA 302:</b> No components are subject to the reporting requirements of SARA Title III, section 302	
<b>SARA 304 Extremely Hazardous Substances Reportable Quantity:</b> The product does not contain any components with a section 304 EHS RQ.	
<b>SARA 311/312 Hazards Identification:</b> Not regulated	
<b>SARA 313:</b> Hydrochloric Acid CAS No. 7647-01-0	
<b>Clean Water Act (CWA) 307:</b> This product does not contain any toxic pollutants listed under the U.S. Clean Water Act section 307.	
<b>Clean Water Act (CWA) 311:</b> This product does not contain any hazardous substances listed under the U.S. Clean Water Act section 311.	
<b>Clean Air Act (CAA) 112 accidental release prevention:</b> No products were found	

U.S. State Regulations	Component	CAS No.
<b>Illinois</b>	Hydrochloric acid	7647-01-0
<b>Right to Know:</b>		
<b>Massachusetts</b>	Hydrochloric acid	7647-01-0
<b>Right to Know:</b>	Sodium hydroxide	1310-73-2
<b>New Jersey</b>	2,4-dinitrophenylhydrazine	119-26-6
<b>Right to Know:</b>	Hydrochloric acid	7647-01-0
	Sodium hydroxide	1310-73-2
	Pyruvic acid sodium salt	113-24-16
<b>Pennsylvania</b>	2,4-dinitrophenylhydrazine	119-26-6
<b>Right to Know:</b>	Hydrochloric acid	7647-01-0
	Sodium hydroxide	1310-73-2
	Pyruvic acid sodium salt	113-24-16
<b>Rhode Island</b>	Hydrochloric acid	7647-01-0
<b>Right to Know:</b>		
<b>California Prop. 65</b>	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	
<b>Canada WHMIS:</b> Exempt		



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### 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.

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