



# SAFETY DATA SHEET

Revision Date 22-Aug-2018

WAI1 - AGHS - OSHA

Revision Number 13

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

### Product Identifier

**Product Name** TISAB III Concentrate with CDTA

**Product No** 940911

**Pure substance/mixture** Mixture

### Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Use as laboratory reagent

**Uses advised against** No Information available

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## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                   |            |
|-----------------------------------|------------|
| Skin Corrosion/Irritation         | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |

### Label Elements

#### **Emergency Overview**

##### **Warning**

##### **Hazard Statements**

Causes skin irritation  
Causes serious eye irritation



**Appearance** Orange

**Physical State** Liquid

**Odor** Slight

### Precautionary Statements

#### **Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection

#### **Response**

Specific treatment (see supplemental instructions on the administration of antidotes on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

### Hazards not otherwise classified (HNOC)

No information available

### Other Information

Toxic to aquatic life with long lasting effects

Toxic to aquatic organisms

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS-No | Weight % |
|-----------|--------|----------|
|-----------|--------|----------|

|                                                                  |             |            |
|------------------------------------------------------------------|-------------|------------|
| Water                                                            | 7732-18-5   | 60 - 70%   |
| Ammonium Chloride                                                | 12125-02-9  | 20 - 30%   |
| Ammonium Acetate                                                 | 631-61-8    | 1 - 10%    |
| trans-1,2-Diaminocyclohexane-Tetraacetic Acid Monohydrate (CDTA) | 125572-95-4 | 1 - 10%    |
| Cresol Red                                                       | 62625-29-0  | 0.1 - 1.0% |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

#### 4. FIRST AID MEASURES

##### First aid measures

|                                           |                                                                                                                                                                                                                                                                                          |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Advice</b>                     | Use first aid treatment according to the nature of the injury. Get medical attention immediately if symptoms occur. Show this safety data sheet to the doctor in attendance.                                                                                                             |
| <b>Eye Contact</b>                        | Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention.                                                                                                                                                                                                    |
| <b>Skin Contact</b>                       | Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. In case of skin reactions, consult a physician.                                                                                                        |
| <b>Inhalation</b>                         | Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.                                                                                                                                                                                      |
| <b>Ingestion</b>                          | Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Call a physician or Poison Control Center immediately.                                                                                                                                              |
| <b>Self-Protection of the First Aider</b> | Use personal protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |

##### Most important symptoms and effects, both acute and delayed

|                                            |                          |
|--------------------------------------------|--------------------------|
| <b>Most important symptoms and effects</b> | No information available |
|--------------------------------------------|--------------------------|

##### Indication of any immediate medical attention and special treatment needed

|                           |                       |
|---------------------------|-----------------------|
| <b>Notes to Physician</b> | Treat symptomatically |
|---------------------------|-----------------------|

#### 5. FIRE-FIGHTING MEASURES

##### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

##### Unsuitable Extinguishing Media

No information available

##### Specific Hazards Arising from the Chemical

No information available.

##### Explosion Data

**Sensitivity to Mechanical Impact** None

**Sensitivity to Static Discharge** None

##### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

|                                  |                                                                                                                                |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>      | Use personal protective equipment. For further specification, refer to section 8 of the SDS. Evacuate personnel to safe areas. |
| <b>Environmental Precautions</b> | Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.                            |

### Methods and Material for Containment and Cleaning Up

|                                |                                                                                             |
|--------------------------------|---------------------------------------------------------------------------------------------|
| <b>Methods for Containment</b> | Prevent further leakage or spillage if safe to do so.                                       |
| <b>Methods for Cleaning Up</b> | Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. |

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

|                 |                                                                                                                                                                                                                                                |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | To avoid risks to human health and the environment, comply with the instructions for use<br>Wear personal protective equipment<br>Avoid breathing dust/fume/gas/mist/vapors/spray<br>Ensure adequate ventilation, especially in confined areas |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Conditions for Safe Storage, Including any Incompatibilities

|                              |                                                                                                                                                           |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage</b>               | Keep container tightly closed in a dry and well-ventilated place<br>Store at room temperature in the original container<br>Keep away from direct sunlight |
| <b>Incompatible Products</b> | No information available                                                                                                                                  |

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

| Component                       | ACGIH TLV                                               | OSHA PEL                                                                    | NIOSH IDLH                                              |
|---------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------|
| Ammonium Chloride<br>12125-02-9 | TWA: 10 mg/m <sup>3</sup><br>STEL: 20 mg/m <sup>3</sup> | (Vacated) TWA: 10 mg/m <sup>3</sup><br>(Vacated) STEL: 20 mg/m <sup>3</sup> | TWA: 10 mg/m <sup>3</sup><br>STEL: 20 mg/m <sup>3</sup> |

### Appropriate engineering controls

|                             |                                                    |
|-----------------------------|----------------------------------------------------|
| <b>Engineering Measures</b> | Showers<br>Eyewash stations<br>Ventilation systems |
|-----------------------------|----------------------------------------------------|

### Individual protection measures, such as personal protective equipment

|                                 |                                                                                                  |
|---------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Eye/face Protection</b>      | Safety glasses with side-shields.                                                                |
| <b>Skin and Body Protection</b> | Wear protective gloves/clothing.                                                                 |
| <b>Respiratory Protection</b>   | None under normal use conditions. In case of inadequate ventilation wear respiratory protection. |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.                           |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

|                       |                          |
|-----------------------|--------------------------|
| <b>Physical State</b> | Liquid                   |
| <b>Appearance</b>     | Orange                   |
| <b>Odor</b>           | Slight                   |
| <b>Odor Threshold</b> | No information available |
| <b>pH</b>             | 5.0                      |
| <b>PH Range</b>       | 4.3 - 5.5                |

| <b><u>Property</u></b>              | <b><u>Values</u></b>     | <b><u>Remarks • Method</u></b> |
|-------------------------------------|--------------------------|--------------------------------|
| <b>Melting point/freezing point</b> | No information available |                                |
| <b>Boiling Point/Range</b>          | ~ 100 °C / 212 °F        |                                |
| <b>Flash Point (High in °C)</b>     | N/A                      |                                |
| <b>Evaporation Rate</b>             | No information available |                                |
| <b>Flammability (solid, gas)</b>    | No information available |                                |
| <b>Flammability Limit in Air</b>    |                          |                                |
| <b>Upper flammability limit:</b>    | No information available |                                |
| <b>Lower flammability limit:</b>    | No information available |                                |
| <b>Vapor pressure</b>               | No information available |                                |
| <b>Vapor Density</b>                | No information available |                                |
| <b>Specific Gravity</b>             | No information available |                                |
| <b>Water Solubility</b>             | Soluble in water         |                                |
| <b>Solubility in other solvents</b> | No information available |                                |
| <b>Partition coefficient</b>        | No information available |                                |
| <b>Autoignition Temperature</b>     | -                        |                                |
| <b>Decomposition Temperature</b>    | No information available |                                |
| <b>Kinematic viscosity</b>          | No information available |                                |
| <b>Dynamic viscosity</b>            | No information available |                                |
| <b>Explosive Properties</b>         | No information available |                                |
| <b>Oxidizing Properties</b>         | No information available |                                |

**Other Information**

|                         |                          |
|-------------------------|--------------------------|
| <b>Softening Point</b>  | No information available |
| <b>Molecular Weight</b> | No information available |
| <b>VOC Content(%)</b>   | No information available |
| <b>Density</b>          | No Information available |
| <b>Bulk Density</b>     | No information available |

**10. STABILITY AND REACTIVITY**

**Reactivity**

No Information available

**Chemical Stability**

Stable under normal conditions

**Possibility of Hazardous Reactions**

None under normal processing

**Conditions to Avoid**

Extremes of temperature and direct sunlight.

**Incompatible Materials**

No information available

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating gases and vapors.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

|              |                          |
|--------------|--------------------------|
| Inhalation   | No information available |
| Eye Contact  | No information available |
| Skin Contact | No information available |
| Ingestion    | No information available |

### Information on Toxicological Effects

|          |                          |
|----------|--------------------------|
| Symptoms | No information available |
|----------|--------------------------|

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                          |                           |
|--------------------------|---------------------------|
| Sensitization            | No information available  |
| Mutagenic Effects        | No information available  |
| Carcinogenicity          | No information available. |
| Reproductive Effects     | No information available  |
| STOT - single exposure   | No information available  |
| STOT - repeated exposure | No information available  |
| Aspiration hazard        | No information available  |

### Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 6346 mg/kg

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

8% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Component                       | Freshwater Algae | Freshwater Fish                                                                               | Water Flea                            |
|---------------------------------|------------------|-----------------------------------------------------------------------------------------------|---------------------------------------|
| Ammonium Chloride<br>12125-02-9 | -                | LC50: = 725 mg/L, 24h (Lepomis macrochirus)<br>LC50: = 209 mg/L, 96h static (Cyprinus carpio) | LC50: = 202 mg/L, 24h (Daphnia magna) |
| Ammonium Acetate<br>631-61-8    | -                | LC50: = 1.06 mg/L, 48h (Cyprinus carpio)                                                      | -                                     |

### Persistence and Degradability

No information available

### Bioaccumulation/ Accumulation

No information available

### Mobility

No information available.

**Other adverse effects**  
No information available

### 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

|                               |                                                                                                     |
|-------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Waste Disposal Methods</b> | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| <b>Contaminated Packaging</b> | Improper disposal or reuse of this container may be dangerous and illegal.                          |

### 14. TRANSPORT INFORMATION

|                 |               |
|-----------------|---------------|
| <b>DOT</b>      | Not regulated |
| <b>ICAO</b>     | Not regulated |
| <b>IATA</b>     | Not regulated |
| <b>IMDG/IMO</b> | Not regulated |

### 15. REGULATORY INFORMATION

#### International Inventories

|                      |                 |
|----------------------|-----------------|
| <b>USINV</b>         | Complies        |
| <b>CANINV</b>        | Complies        |
| <b>EINECS/ELINCS</b> | Does not Comply |
| <b>ENCS</b>          | Does not Comply |
| <b>IECSC</b>         | Does not Comply |
| <b>KECL</b>          | Does not Comply |
| <b>PICCS</b>         | Does not Comply |
| <b>AICS</b>          | Does not Comply |

#### Legend:

**USINV/ TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**CANINV/ DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**ENCS** - Japanese Existing and New Chemical Substances  
**IECSC** - Chinese Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

#### U.S. Federal Regulations

#### SARA 313

#### SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

**CWA (Clean Water Act)**

| Component                       | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Ammonium Chloride<br>12125-02-9 | 5000 lb                     | -                      | -                         | X                          |
| Ammonium Acetate<br>631-61-8    | 5000 lb                     | -                      | -                         | X                          |

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component                       | Hazardous Substances RQs | CERCLA EHS RQs | RQ                                         |
|---------------------------------|--------------------------|----------------|--------------------------------------------|
| Ammonium Chloride<br>12125-02-9 | 5000 lb                  | -              | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ |
| Ammonium Acetate<br>631-61-8    | 5000 lb                  | -              | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ |

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

**U.S. EPA Label Information**

No information available

**16. OTHER INFORMATION**

|                            |                                |
|----------------------------|--------------------------------|
| <b>Prepared By</b>         | Regulatory Affairs             |
| <b>Prepared For</b>        | Thermo Fisher Scientific Inc.© |
| <b>Issue Date</b>          | No information available       |
| <b>Revision Date</b>       | 22-Aug-2018                    |
| <b>Reason for revision</b> | SDS sections updated.          |

**Disclaimer**

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**End of Safety Data Sheet**