



**Material Safety Data Sheet**  
**Tisab II (1:1, APHA for fluoride)**

**Section 1 - Chemical Product and Company Identification**

**MSDS Name:**

Tisab II (1:1, APHA for fluoride)

**Catalog Numbers:**

LC26130

**Synonyms:**

total ionic strength adjustment buffer (fluoride electrode)

**Company Identification:**

LabChem, Inc.  
 200 William Pitt Way  
 Pittsburgh, PA 15238

**Company Phone Number:**

(412) 826-5230

**Emergency Phone Number:**

(800) 424-9300

**CHEMTREC Phone Number:**

(800) 424-9300

**Section 2 - Composition, Information on Ingredients**

CAS#	Chemical Name:	Percent
7647-14-5	Sodium chloride	5.8
64-19-7	Acetic acid	5.7
1310-73-2	Sodium hydroxide	0.5
482-54-2	CDTA	0.4

**Section 3 - Hazards Identification**

**EMERGENCY OVERVIEW**

*Appearance: colorless*

*Warning! Skin sensitizer. May cause severe digestive tract irritation with possible burns.  
 May cause severe eye irritation and possible injury.*

*Target Organs: none known.*

**Potential Health Effects****Eye:**

Causes irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury.



## Material Safety Data Sheet

### Tisab II (1:1, APHA for fluoride)

**Skin:**

May cause skin irritation. May cause allergic contact dermatitis.

**Ingestion:**

Ingestion can result in mouth, throat, and abdominal burning pain, vomiting, diarrhea, nausea, bloody stools, hematemesis, hematuria, albuminuria, asphyxia.

**Inhalation:**

Inhalation of vapors may cause respiratory tract irritation and coughing.

**Chronic:**

May cause dermatitis and conjunctivitis. Acetic acid sensitization dermatitis from prolonged exposure can occur. Prolonged exposure to acetic acid may result in tooth discoloration, enamel erosion, jaw necrosis, nasal ulceration, laryngitis, pneumonia, bronchitis, coughing, gastrointestinal disturbances.

## Section 4 - First Aid Measures

**Eyes:**

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once. Cover burns with loose sterile non-medicated bandages.

**Skin:**

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes. Cover burns with a dry sterile bandage (secure, not tight).

**Ingestion:**

Get medical aid at once. Give 1 ounce of milk of magnesia. Give conscious victim large quantities of water to dilute acid. Give oxygen if respiration is depressed.

**Inhalation:**

Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

**Notes to Physician:**

Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:**

Negligible fire and explosion hazard when exposed to heat or flame. No acute hazards. Move container if possible, avoid breathing vapors or dust.

**Extinguishing Media:**

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

**Autoignition Temperature:**

No information found.

**Flash Point:**

No information found.

**NFPA Rating:**

CAS# 7647-14-5: Not published.

CAS # 64-19-7 health-3; flammability-2; reactivity-0

CAS# 1310-73-2: Not published.

CAS# 482-54-2: Not published.



# Material Safety Data Sheet

## Tisab II (1:1, APHA for fluoride)

### Explosion Limits:

Lower:      Upper:

## Section 6 - Accidental Release Measures

### General Information:

Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Scoop material into suitable (plastic or glass) container, label for disposal as "corrosive".

## Section 7 - Handling and Storage

### Handling:

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas.

### Storage:

Store capped at room temperature. Protect from heat and incompatibles.

## Section 8 - Exposure Controls, Personal Protection

### Engineering Controls:

Provide local exhaust or general dilution ventilation.

### Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Sodium chloride	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Acetic acid	10 ppm TWA; 15 ppm STEL	10 ppm TWA; 25 mg/m <sup>3</sup> TWA	10 ppm TWA; 25 mg/m <sup>3</sup> TWA;
Sodium hydroxide	None of the components are on this list.	None of the components are on this list.	2 mg/m <sup>3</sup> TWA;
CDTA	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.

### OSHA Vacated PELs

Acetic acid: 10 ppm TWA; 25 mg/m<sup>3</sup> TWA

Acetic acid: 10 ppm TWA; 25 mg/m<sup>3</sup> TWA

Acetic acid: 10 ppm TWA; 25 mg/m<sup>3</sup> TWA

## Personal Protective Equipment

### Eyes:

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

### Skin:

Wear appropriate protective gloves to prevent skin exposure.

### Clothing:

Wear appropriate protective clothing to prevent skin exposure.



## Material Safety Data Sheet

### Tisab II (1:1, APHA for fluoride)

#### Respirators:

Not required for normal use. Firefighting-- any self-contained breathing apparatus with full facepiece operated in pressure-demand mode.

## Section 9 - Physical and Chemical Properties

**Physical State:** Clear liquid

**Color:** colorless

**Odor:** slight pungent - vinegar-like

**pH:** 5.4

**Vapor Pressure:** No information found.

**Vapor Density:** No information found.

**Evaporation Rate:** < ether

**Viscosity:** No information found.

**Boiling Point:** > 212°F (> 100.00°C)

**Freezing/Melting Point:** < 32°F (< 0.00°C)

**Decomposition Temperature:** No information found.

**Solubility in water:** Soluble.

**Specific Gravity/Density:** >1.0

**Molecular Formula:** No information found.

**Molecular Weight:** No information found.

## Section 10 - Stability and Reactivity

#### Chemical Stability:

Stable under normal temperatures and pressures. May emit small amounts of acetic vapors.

#### Conditions to Avoid:

Incompatible materials, heat.

#### Incompatibilities with Other Materials

None reported.

#### Hazardous Decomposition Products

Acetic acid vapors.

#### Hazardous Polymerization

Has not been reported

## Section 11 - Toxicological Information

#### RTECS:

CAS# 7647-14-5: VZ4725000.

CAS# 64-19-7: AF1225000.

CAS# 1310-73-2: WB4900000.

CAS# 482-54-2: AG5000000.



**Material Safety Data Sheet**  
**Tisab II (1:1, APHA for fluoride)**

**LD50/LC50:**

CAS# 7647-14-5:

Oral, mouse: LD50 = 4 gm/kg

Oral, rat: LD50 = 3 gm/kg.

CAS# 64-19-7:

Inhalation, mouse: LC50 = 5620 ppm/1H

Oral, rat: LD50 = 3310 mg/kg

Skin, rabbit: LD50 = 1060 mg/kg.

CAS# 1310-73-2:

No information found. CAS# 482-54-2:

No information found.

**Carcinogenicity:**

CAS# 7647-14-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 64-19-7: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 1310-73-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 482-54-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

**Epidemiology:**

Solutions containing acetic acid are mild to severe skin, eye, mucous membrane, respiratory irritant and skin sensitizer.

**Teratogenicity:**

**Reproductive:**

**Mutagenicity**

**Neurotoxicity**

**Section 12 - Ecological Information**

No information found.

**Section 13 - Disposal Considerations**

Dispose of in accordance with federal, state, and local regulations.

**Section 14 - Transport Information**

**US DOT**

**Shipping Name:** Not regulated.

**Hazard Class:**

**UN Number:**

**Packing Group:**

**Section 15 - Regulatory Information**

**US Federal**



## Material Safety Data Sheet

### Tisab II (1:1, APHA for fluoride)

#### TSCA

CAS# 7647-14-5 is listed on the TSCA Inventory.  
CAS# 64-19-7 is listed on the TSCA Inventory.  
CAS# 1310-73-2 is listed on the TSCA Inventory.  
CAS# 482-54-2 is listed on the TSCA Inventory.

#### SARA Reportable Quantities (RQ)

CAS# 64-19-7: final RQ = 5000 pounds (2270 kg)  
CAS# 1310-73-2: final RQ = 1000 pounds (454 kg)

#### CERCLA/SARA Section 313

None of the components are on this list.

#### OSHA - Highly Hazardous

None of the components are on this list.

#### US State

##### State Right to Know

Acetic acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Sodium hydroxide can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

##### California Regulations

#### European/International Regulations

##### Canadian DSL/NDSL

CAS# 7647-14-5 is listed on Canada's DSL List.  
CAS# 64-19-7 is listed on Canada's DSL List.  
CAS# 1310-73-2 is listed on Canada's DSL List.  
CAS# 482-54-2 is listed on Canada's DSL List.

##### Canada Ingredient Disclosure List

CAS# 7647-14-5 is not listed on Canada's Ingredient Disclosure List.  
CAS# 64-19-7 is listed on Canada's Ingredient Disclosure List.  
CAS# 1310-73-2 is listed on Canada's Ingredient Disclosure List.  
CAS# 482-54-2 is not listed on Canada's Ingredient Disclosure List.

## Section 16 - Other Information

MSDS Creation Date: February 17, 1998

Revision Date: September 24, 2004

*Information in this MSDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc. assumes no liability resulting from the use of this MSDS. The user must determine suitability of this information for his application.*