4409.

SA08211

Kit #19 Qualitative Introduction to Water Pollution

19-MSDS

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Nitrate Test Solution, No. 1
Alternative names: Hydrochloric Acid, 0.2M, Hydrochloric acid water solution.
Product Number: 19-11EA, A19-11, C19-11
1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Corrosive to metals (Category 1), H290
Skin Corr. (Category 1A) H314
Eye Dam. (Category 1) H318

2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram:

Hazards statements: H290 - May be corrosive to metals, H314– Causes severe skin burns and eye damage. H318– Causes serious eye damage.
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling.
2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	99.33%	Not classified
Hydrochloric acid	CAS# 7647-01-0	0.67%	Acute Tox. 4, H302; Skin Corr. 1A H314; Eye Dam. 1, H318; STOT SE 3, H335

3.3 Chemicals where a trade secret is claimed: none

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Thermal decompositions generates corrosive vapors.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed container. Dispose of in accordance with you local regulations. Small spills neutralize with acid neutralizer, or sodium hydroxide solution and mop up the area. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Acid cabinet. Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 2 ppm (hydrochloric acid)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Colorless to slightly yellow.
Odor: Pungent
pH: <2
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 537.2 °C (hydrochloric acid)
Autoignition: Not available

Flammability: Not available
Boiling point: 37.08°C estimated (hydrochloric acid)
Melting point: -114.22°C (-173.6° F)
Freezing point: 3.33°C (38° F)
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): 1.18 g/cm³ @ 25°C (hydrochloric acid)
Percent volatile (%): 66% estimated (hydrochloric acid)
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Alkali metals, metals, organic materials, strong oxidizing agents, amines.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye burns and eye damage. Skin: Causes severe skin burns. Inhalation: May cause respiratory track irritation. Ingestion: Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract.

Acute oral toxicity ORAL LD_{50}: 900mg/kg [Rabbit], as hydrochloric acid
Acute vapor toxicity IHL-LC_{50}: 3124ppm [Rat]/1h, as hydrochloric acid
DERMAL LD_{50}: 1449mg/kg [Mouse], as hydrochloric acid

Carcinogenicity:
California prop 65: None

12. ECOLOGICAL INFORMATION

LC50 (Gambusia affinis) 96 hours: 282 mg/l (hydrochloric acid)

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 1789
Shipping name: Hydrochloric acid
Hazard Class: 8
Packing group: PG III
Exceptions: Ltd Qty. ≤5L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-595-7). WHMIS (Canada): CLASS E: Corrosive liquid. DSCL (EEC) R34-Causes burns.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Nitrate Indicator
Alternative names: Nitrate test powder.
Product Number: 318S-B02E, 19-12EA, A19-12, C19-12
1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number:
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Specific target organ toxicity-repeated exposure, ingestion (Category 2), CNS, H373
Aquatic Acute (Category 2), H401
Aquatic Chronic (Category 2), H411
2.2 Label elements, including precautionary statements
Signal word: Warning
Pictogram:

Hazards statements: H373-May cause damage to organs: lungs, CNS, liver, blood through repeated inhalation and ingestion.
H401-Toxic to aquatic life, H411– Toxic to aquatic life with long lasting effects
Precautionary statements: P264 - Wash skin thoroughly after handling, P280 - Wear protective gloves, eye protection. P260– Avoid breathing dust.
P273—Avoid release to the environment.P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: N/A
3.2 Mixture: yes

Chemical Name	Product identifier	%	GHS-US classification
Barium sulfate	CAS#7727-43-7	50-64%	Aquatic Acute 3, H402; Aquatic Chronic 3, H402
Proprietary ingredient 2	Trade Secret	1-3%	STOT RE 2, H373
Proprietary ingredient 3	Trade Secret	0.5-1%	Eye Irrit. 2A, H319, Skin Irrit. 2, H315, STOT SE 2, H335
Proprietary ingredient 4	Trade Secret	20-30%	Not classified
Proprietary ingredient 5	Trade Secret	0.5-1%	Not classified
Proprietary ingredient 6	Trade Secret	1-1.5%	Aquatic Acute 1, H400, Aquatic Chronic 1, H410

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media:
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Sweep up without generating dust and place for disposal. Reuse if not contaminated. Wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing dust. Use under the hood, or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: Not available.
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.
Appearance: Beige powder.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: Not available
Autoignition: Not available

Boiling point: Not available
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Not available.
Specific gravity (H_2O = 1): Not available
Percent volatile (%): Not available
Molecular formula: Not available
Molecular weight: Not available

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Not available
Incompatibilities: Not avaialble.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: May cause eye irritation. Skin: Not expected to cause skin irritation. Inhalation: May cause respiratory track irritation. Prolonged or repeated inhalation of large amounts may cause an increased incidence of coughing and bronchitis shown in manufacturing settings. Ingestion: May cause digestive track irritation. Prolonged and repeated ingestion may affect CNS. It may also affect kidney, liver, blood.

Toxicological data
Acute oral toxicity ORAL LD_{50}: Not available
Acute vapor toxicity Not available
DERMAL LD_{50}: Not available

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

EC50 Daphnia magna 32 mg/l, 48h (barium sulfate)

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 1564
Shipping name: Barium compounds, n.o.s (barium sulfate)
Hazard Class: 6.1
Packing group: III
Exceptions: Ltd Qty. 5kg

15. REGULATORY INFORMATION

TSCA-listed.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Phosphate Test Solution #1
Alternative names: Not available.
Product Number: 19-13AEA, 19-13EA, A19-13, C19-13, 4-6EA, A4-6.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only.

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA.
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268.

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Acute Tox. Oral (Category 4), H302
Skin Corr. (Category 1A) H314
Eye Dam. (Category 1) H318
Specific target organ toxicity –single exposure (Category 3) H335

Pictogram:

2.2 Label elements, including precautionary statements
Signal word: Danger
Hazards statements: H302 - Harmful if swallowed, H314– Causes severe skin burns and eye damage. H335– May cause respiratory irritation.
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling.
2.3 Hazards not otherwise classified: none.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	81-97.9%	Not classified
Hydrochloric acid	CAS# 7647-01-0	1-14%	Acute Tox. 4, H302; Skin Corr. 1A H314; Eye Dam. 1, H318; STOT SE 3, H335
Ammonium Molybdate	CAS#12054-85-2	1-5%	Acute Tox. 4, H302; Skin Irrit. 2 H315; Eye Irrit. 2A, H319; STOT SE 3, H335
Ammonium Metavanadate	CAS#7803-55-6	0.1-1%	Acute Tox. 3, H301; Skin Irrit. 2 H315; Eye Irrit. 2A, H319; STOT SE 3, H335

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Thermal decompositions generates corrosive vapors.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed hazardous waste container. Dispose of in accordance with you local regulations. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Acid cabinet. Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 2 ppm (hydrochloric acid), TWA: 0.5mg/m³ (ammonium molybdate) NIOSH STEL: 0.05mg/m³ (ammonium metavanadate).

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Colorless to slightly yellow.
Odor: Pungent
pH: <2
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 537.2 °C (hydrochloric acid)
Autoignition: Not available

Flammability: Not available
Boiling point: 37.08°C estimated (hydrochloric acid)
Melting point: -114.22°C (-173.6° F)
Freezing point: 3.33°C (38° F)
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): 1.18 g/cm³ @ 25°C (hydrochloric acid)
Percent volatile (%): 66% estimated (hydrochloric acid)
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Alkali metals, metals, organic materials, strong oxidizing agents, amines.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye burns and eye damage. Skin: Causes severe skin burns. Inhalation: May cause respiratory track irritation. Ingestion: Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract.

Acute oral toxicity ORAL LD_{50}: 900mg/kg [Rabbit], as hydrochloric acid
Acute vapor toxicity IHL-LC_{50}: 3124ppm [Rat]/1h, as hydrochloric acid
DERMAL LD_{50}: 1449mg/kg [Mouse], as hydrochloric acid
Acute oral toxicity ORAL LD_{50}: 58.1mg/kg [Rat], as Ammonium metavanadate
Acute oral toxicity ORAL LD_{50}: 333mg/kg [Rat], as Ammonium molybdate

Carcinogenicity:

12. ECOLOGICAL INFORMATION

LC50 (Gambusia affinis) 96 hours: 282 mg/l (hydrochloric acid)

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 2922
Shipping name: Corrosive liquid, toxic, n.o.s.
Hazard Class: 8, 6.1
Packing group: PG II
Exceptions: Ltd Qty. ≤1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-595-7). WHMIS (Canada): CLASS E: Corrosive liquid. DSCL (EEC) R34-Causes burns.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Phosphate Test Solution #2
Alternative names: Stannous chloride reagent.
Product Number: 19-14EA, A19-14, C19-14, 4-7EA, A4-7.
1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only.

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA.
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268.

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Skin Irrit. (Category 2), H315
Eye Irrit. (Category 2A), H319

2.2 Label elements, including precautionary statements
Signal word: Warning
Pictogram: 
Hazards statements: H315 - Causes skin irritation, H319 - Causes serious eye irritation.
Precautionary statements: P264 - Wash exposed skin thoroughly after handling, P280 - Wear protective gloves, eye protection

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture

Chemical Name	Product identifier	%	GHS-US classification
Glycerol	CAS# 56-81-5	97-99%	Not classified
Stannous chloride	CAS# 10025-69-1	1-3%	Acute Tox. 4 (Oral), H302; Skin Corr. 1 H314 ; Eye Dam. 1, H318.

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Nonflammable liquid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not applicable.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed bag or container. For small spill use paper towel and place in trash. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling:
Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 10mg/m³ (ACGIH) as glycerol. TWA: 2mg/m³ (ACGIH) as stannous chloride.
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Viscous liquid.
Appearance: Transparent, Colorless, Clear.
Odor: Mild
pH: not available
Vapor Pressure (mm Hg): 0 @ 20°C
Vapor Density: 3.17
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 160°C/ 320°F closed cup (glycerol)
Autoignition: 370-392 °C/698-739°F (glycerol)

Boiling point: 290°C/554F (glycerol)
Melting point: 19°C/62.2F (glycerol)
Freezing point: Not available
Decomposition temp: not available
Solubility: soluble in water, alcohol.
Specific gravity (H_2O = 1): 1.26 at 20°C
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: High temperatures, sparks open flames and incompatible materials.
Incompatibilities: Reactive with oxidizing agents such as chromium trioxide, potassium chlorate, potassium permanganate. Glycerin may react violently with acetic anhydride, aniline and nitrobenzene, chromic oxide, lead oxide, fluorine, phosphorous triiodide, acids.
Hazardous decomposition: Carbon monoxide, carbon oxide
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Causes eye irritation. Symptoms may include stinging, tearing, redness. Skin: Causes skin irritation and dehydration. Inhalation: This material has a very low vapor pressure. Therefore not expected to be an inhalation hazard for normal handling. If heated or misted, the inhalation may cause irritation to respiratory track. Ingestion: May be harmful when ingested.

Toxicological data
ORAL LD_{50}: 12600mg/kg [Rat], 4090mg/kg [Mouse] as glycerol.
DERMAL LD_{50}: 21900mg/kg [Rat] as glycerol.
INHALATION LC_{50}: >570mg/m³ 1h [Rat] (Mist) as glycerol.

ORAL LD_{50}: 2274.6mg/kg [Rat] as stannous chloride
DERMAL LD_{50}: Not available
INHALATION LC_{50}: Not available
Carcinogenicity: California prop 65: Not classified

12. ECOLOGICAL INFORMATION

Ecotoxicity in water (LC_{50}): 282mg/l 96 hrs [Fish(Gambusia affinis)] as stannous chloride.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: N/A
Hazard Class: N/A
Packing group: N/A
Exceptions: Ltd Qty. N/A

15. REGULATORY INFORMATION

TSCA 8(b) listed. EINECS (200-289-5). DSCL (EEC) R24/25– Avoid contact with skin and eyes. WHMIS (Canada): Not controlled.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Silica Test Solution 1
Alternative names: Hydrochloric Acid, 6M, Hydrochloric acid water solution.
Product Number: 19-15EA, A19-15, C19-15.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Acute Tox. Oral (Category 4), H302
Skin Corr. (Category 1A) H314
Eye Dam. (Category 1) H318
Specific target organ toxicity –single exposure (Category 3) H335

Pictogram:

2.2 Label elements, including precautionary statements
Signal word: Danger
Hazards statements: H302 - Harmful if swallowed, H314– Causes severe skin burns and eye damage. H335– May cause respiratory irritation.
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling.
2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	79.2%	Not classified
Hydrochloric acid	CAS# 7647-01-0	20.8%	Acute Tox. 4, H302; Skin Corr. 1A H314; Eye Dam. 1, H318; STOT SE 3, H335

3.3 Chemicals where a trade secret is claimed: none

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Thermal decompositions generates corrosive vapors.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed container. Dispose of in accordance with you local regulations. Small spills neutralize with acid neutralizer, or sodium hydroxide solution and mop up the area. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Acid cabinet. Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 2 ppm (hydrochloric acid)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Colorless to slightly yellow.
Odor: Pungent
pH: <2
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 537.2 °C (hydrochloric acid)
Autoignition: Not available

Flammability: Not available
Boiling point: 37.08°C estimated (hydrochloric acid)
Melting point: -114.22°C (-173.6° F)
Freezing point: 3.33°C (38° F)
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): 1.18 g/cm³ @ 25°C (hydrochloric acid)
Percent volatile (%): 66% estimated (hydrochloric acid)
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Alkali metals, metals, organic materials, strong oxidizing agents, amines.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye burns and eye damage. Skin: Causes severe skin burns. Inhalation: May cause respiratory track irritation. Ingestion: Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract.

Acute oral toxicity ORAL LD_{50}: 900mg/kg [Rabbit], as hydrochloric acid
Acute vapor toxicity IHL-LC_{50}: 3124ppm [Rat]/1h, as hydrochloric acid
DERMAL LD_{50}: 1449mg/kg [Mouse], as hydrochloric acid

Carcinogenicity:
California prop 65: None

12. ECOLOGICAL INFORMATION

LC50 (Gambusia affinis) 96 hours: 282 mg/l (hydrochloric acid)

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 1789
Shipping name: Hydrochloric acid
Hazard Class: 8
Packing group: PG II
Exceptions: Ltd Qty. ≤1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-595-7). WHMIS (Canada): CLASS E: Corrosive liquid. DSCL (EEC) R34-Causes burns.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Silica Test Solution 2
Alternative names: Ammonium molybdate water solution.
Product Number: 19-16EA, A19-16, C19-16.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only.

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA.
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268.

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Skin Irrit. (Category 2), H315
Eye Irrit. (Category 2A), H319

2.2 Label elements, including precautionary statements
Signal word: Warning
Pictogram:

Hazards statements: H315– Causes skin irritation. H319– Causes serious eye irritation.
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling.
P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

2.3 Hazards not otherwise classified: none.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	86-94%	Not classified
Ammonium molybdate	CAS#12054-85-2	6-14%	Acute Tox. 4, H302; Skin Irrit. 2 H315; Eye Irrit. 2A, H319; STOT SE 3, H335; Aquatic Acute 3, H402

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed hazardous waste container. Dispose of in accordance with you local regulations. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Acid cabinet. Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 0.5mg/m^3 (ammonium molybdate).

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Appearance: Transparent, Clear.
Odor: Odorless
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: Not available
Autoignition: Not available

Flammability: Not available
Boiling point: Not available
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water.
Specific gravity (H_2O = 1): Not available
Percent volatile (%): 99%
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Excessive heat, incompatibles.
Incompatibilities: Acids.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: May cause eye irritation. Skin: May cause skin irritation. Inhalation: Not expected to cause any acute reaction. Ingestion: Large doses may cause colic, gout, diarrhea, trembling, headache, weakness, fatigue, People who have an inadequate intake of dietary intake of copper, or some dysfunction in their copper metabolism could be at greater risk for Molybdenum toxicity.

Toxicological data:
Acute oral toxicity ORAL LD_{50}: 333mg/kg [Rat], as Ammonium molybdate
Acute vapor toxicity IHL-LC_{50}: Not available
DERMAL LD_{50}: Not available

Carcinogenicity:
California prop 65: None

12. ECOLOGICAL INFORMATION

EC50: green algae, 72 hours: 41 mg/l as ammonium molybdate.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: Not available
Hazard Class: N/A
Packing group: N/A
Exceptions: N/A

15. REGULATORY INFORMATION

TSCA-listed. WHMIS (Canada): Not controlled under WHMIS (Canada). DSCL (EEC) R22-Harmfull if swallowed. R36/37/38– Irritating to eyes, respiratory system and skin as ammonium molybdate.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Silica Test Solution 3
Alternative names: Oxalic acid water solution.
Product Number: 19-17EA, A19-17, C19-17.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only.

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA.
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268.

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Skin Corr. (Category 1), H314
Eye Dam. (Category 1), H318
Acute Tox. Oral (Category 5), H303

2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram:
Hazards statements: H314– Causes severe skin burns and eye damage. H303-May be harmful if swallowed.
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling.
P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

2.3 Hazards not otherwise classified: none.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	86-94%	Not classified
Oxalic acid	CAS#144-62-7	6-14%	Acute Tox. 4, H302; Eye Dam. 1 H318; Skin Corr. 1, H314; STOT SE 3, H335; STOT RE 2, H373

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develops.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a hazardous waste container. Dispose of in accordance with you local regulations. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Acid cabinet. Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 1mg/m³ as oxalic acid.

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Appearance: Transparent, Clear.
Odor: Odorless
pH: Acidic
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: Not available
Autoignition: Not available

Flammability: Not available
Boiling point: Not available
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water.
Specific gravity (H_2O = 1): Not available
Percent volatile (%): 99%
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Excessive heat, incompatibles.
Incompatibilities: Oxidizing agents, metals, alkalis, chlorites, hypochlorites, silver and silver compounds.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Causes severe irritation with possible burns. It may result in corneal damage and conjunctivitis. Skin: Causes skin irritation. Chemical burns may occur. May be harmful if absorbed through skin. Inhalation: Not expected to cause any acute reaction because of low vapor pressure. Ingestion: May be harmful if swallowed. Causes severe digestive tract irritation and possible burns. It may affect cardiovascular system and urinary system. Symptoms my include vomiting, diarrhea, bloody stool, abdominal pain, headache. Oxalic acid can bind calcium to form calcium oxalate which may deposit in kidney tubules.

Toxicological data:
Oral LD_{50}: 375mg/kg [Rat] as oxalic acid.
Dermal LD_{50}: 20,000mg/kg as oxalic acid.

Carcinogenicity:
California prop 65: Not listed

12. ECOLOGICAL INFORMATION

EC50: daphnia magna 48 hours: 162.2 mg/l as oxalic acid.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 3265
Shipping name: Corrosive liquid, acidic, organic, n.o.s.
Hazard Class: 8
Packing group: III
Exceptions: Ltd. Qty. 5L

15. REGULATORY INFORMATION

TSCA-listed. EINECS (205-634-3). DSCL (EEC) R21/22-Harmfull in contact with skin and if swallowed.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Silica Test Solution 4
Alternative names: Stannous chloride reagent.
Product Number: 19-14AEA, A19-14A, C19-14A.
1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only.

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA.
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268.

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Skin Irrit. (Category 2), H315
Eye Irrit. (Category 2A), H319

2.2 Label elements, including precautionary statements
Signal word: Warning
Pictogram: 
Hazards statements: H315 - Causes skin irritation, H319 - Causes serious eye irritation.
Precautionary statements: P264 - Wash exposed skin thoroughly after handling, P280 - Wear protective gloves, eye protection

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture

Chemical Name	Product identifier	%	GHS-US classification
Glycerol	CAS# 56-81-5	97-99%	Not classified
Stannous chloride	CAS# 10025-69-1	1-3%	Acute Tox. 4 (Oral), H302; Skin Corr. 1 H314 ; Eye Dam. 1, H318.

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Nonflammable liquid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not applicable.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed bag or container. For small spill use paper towel and place in trash. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling:
Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 10mg/m³ (ACGIH) as glycerol. TWA: 2mg/m³ (ACGIH) as stannous chloride.
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Viscous liquid.
Appearance: Transparent, Colorless, Clear.
Odor: Mild
pH: not available
Vapor Pressure (mm Hg): 0 @ 20°C
Vapor Density: 3.17
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 160°C/ 320°F closed cup (glycerol)
Autoignition: 370-392 °C/698-739°F (glycerol)

Boiling point: 290°C/554F (glycerol)
Melting point: 19°C/62.2F (glycerol)
Freezing point: Not available
Decomposition temp: not available
Solubility: soluble in water, alcohol.
Specific gravity (H_2O = 1): 1.26 at 20°C
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: High temperatures, sparks open flames and incompatible materials.
Incompatibilities: Reactive with oxidizing agents such as chromium trioxide, potassium chlorate, potassium permanganate. Glycerin may react violently with acetic anhydride, aniline and nitrobenzene, chromic oxide, lead oxide, fluorine, phosphorous triiodide, acids.
Hazardous decomposition: Carbon monoxide, carbon oxide
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Causes eye irritation. Symptoms may include stinging, tearing, redness. Skin: Causes skin irritation and dehydration. Inhalation: This material has a very low vapor pressure. Therefore not expected to be an inhalation hazard for normal handling. If heated or misted, the inhalation may cause irritation to respiratory track. Ingestion: May be harmful when ingested.

Toxicological data
ORAL LD_{50}: 12600mg/kg [Rat]. 4090mg/kg [Mouse] as glycerol.
DERMAL LD_{50}: 21900mg/kg [Rat] as glycerol.
INHALATION LC_{50}: >570mg/m³ 1h [Rat] (Mist) as glycerol.

ORAL LD_{50}: 2274.6mg/kg [Rat] as stannous chloride
DERMAL LD_{50}: Not available
INHALATION LC_{50}: Not available
Carcinogenicity: California prop 65: Not classified

12. ECOLOGICAL INFORMATION

Ecotoxicity in water (LC_{50}): 282mg/l 96 hrs [Fish(Gambusia affinis)] as stannous chloride.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: N/A
Hazard Class: N/A
Packing group: N/A
Exceptions: Ltd Qty. N/A

15. REGULATORY INFORMATION

TSCA 8(b) listed. EINECS (200-289-5). DSCL (EEC) R24/25– Avoid contact with skin and eyes. WHMIS (Canada): Not controlled.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Sulfide Test Solution 1
Alternative names: Amine-sulfuric acid solution.
Product Number: 19-18EA, A19-18, C19-18

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Acute Tox. Oral, (Category 2), Eye Dam. (Category 1), H318 H300; Skin sensitizer (Category 1), H317
Skin Corr. (Category 1), H314; H300; Skin sensitizer (Category 1), H317
Corrosive to metals (Category 1), H290

2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram:
Hazards statements: H300-Fatal if swallowed, H314 -Causes severe skin burns and eye damage, H317-May cause an allergic skin reaction, H290-May be corrosive to metals.
Precautionary statements: P264 - Wash exposed skin thoroughly after handling, P280 - Wear protective gloves, eye protection. P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	50-89%	Not classified
Sulfuric acid	CAS# 7664-93-9	10-50%	Skin Corr. 1 H314 ; Eye Dam. 1, H318; Acute Tox. 2, H330; Met. Corr. 1, H290.
N,N-Dimethyl-1,4-phenylenediamine oxalate	CAS# 62778-12-5	0.1-1%	Acute Tox. 2, H300, Acute Tox 4, H332; Acute Tox. 4 312; Skin Irrit. 2, H315, Eye Irrit. 2A, H319; Skin Sens. 1, H317, STOT SE 3, H335

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Nonflammable liquid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: When heated to decomposition emits toxic fumes.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed hazardous waste container. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use under the hood, or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Store in a dedicated acid cabinet. Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: OSHA: TWA: 0.2mg/m³ for sulfuric acid.
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Appearance: Clear dark color.
Odor: No odor
pH: <1
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: N/A
Autoignition: N/A

Boiling point: Not available
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water.
Specific gravity (H_2O = 1): Not available
Percent volatile (%): Not available
Molecular formula: Not available
Molecular weight: Not available

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatibles.
Incompatibilities: Slightly reactive with oxidizing agents, reducing agents, organic materials, acids, alkalis. Corrosive to metals.
Hazardous decomposition: When heated to decomposition, emits toxic fumes.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Corrosive to eyes. Splashes may cause severe burns and permanent eye damage. Skin: Corrosive to skin. Can cause redness, pain and severe skin burns. Inhalation: Vapors are irritating to mucous membrane and eyes. Inhalation of vapors can cause coughing, chocking. Inflammation of the nose, throat, and upper respiratory tract. Ingestion: Toxic. Fatal if swallowed. Swallowing sulfuric acid cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract.

Toxicological data:

Oral LD_{50}: 2140mg/kg [Rat]. Sulfuric acid
Dermal LD_{50}: Not available
Inhalation, Mist LC_{50}: 510mg/kg 2h [Rat]. Sulfuric acid
Inhalation, Gases LC_{50}: 347ppm 1h [Rat]. Sulfuric acid
Acute oral toxicity ORAL LD_{50}: 30-50mg/kg[Rat], as N,N-Dimethyl-1,4-phenylenediamine oxalate.

12. ECOLOGICAL INFORMATION

LC_{50} Brachydanio rerio 500mg/L 96h as sulfuric acid.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 2922
Shipping name: Corrosive liquid, toxic, n.o.s.
Hazard Class: 8, 6.1
Packing group: PG II
Exceptions: Ltd Qty. ≤1L

15. REGULATORY INFORMATION

TSCA-listed. WHMIS (Canada) CLASS D-1A: Material causing immediate and serious toxic effects. (VERY TOXIC). CLASS E: Corrosive liquid. DSCL (EEC): R35-Causes severe burns.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Sulfide Test Solution 2
Alternative names: Ferric chloride water solution.
Product Number: 19-19EA, A19-19, C19-19.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Acute Tox. Oral (Category 4), H302
Eye Dam. (Category 1), H318; Skin Corr. (Category 1), H314
Aquatic Acute (Category 2), H401
Corrosive to metals (Category 1), H290

Pictogram:

2.2 Label elements, including precautionary statements
Signal word: Danger
Hazards statements: H302 - Harmful if swallowed, H314– Causes severe skin burns and eye damage, H401-Toxic to aquatic life, H290 May be corrosive to metals
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling. P273-Avoid release to the environment, P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	15.8%	Not classified
Ferric chloride	CAS# 7705-08-0	80.0%	Acute Tox. 4, H302; Skin Corr. 1 H314; Eye Dam. 1, H318; Met. Corr. 1, H290, Aqutic Acute 2, H401
Hydrochloric acid	CAS# 7647-01-0	4.2%	Acute Tox. 4, H302; Skin Corr. 1A H314; Eye Dam. 1, H318; STOT SE 3, H335

3.3 Chemicals where a trade secret is claimed: None.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Thermal decompositions generates corrosive vapors.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a chemical waste container. Dispose of in accordance with you local regulations. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Acid cabinet. Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 2 ppm (hydrochloric acid), TWA: 1mg/m³ (iron trichloride)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Dark brown.
Odor: Pungent
pH: <2
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 537.2 °C (hydrochloric acid)
Autoignition: Not available

Flammability: Not available
Boiling point: 37.08°C estimated (hydrochloric acid)
Melting point: -114.22°C (-173.6° F)
Freezing point: 3.33°C (38° F)
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): 1.18 g/cm³ @ 25°C (hydrochloric acid)
Percent volatile (%): 66% estimated (hydrochloric acid)
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Alkali metals, metals, organic materials, strong oxidizing agents, amines.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye burns and eye damage. Skin: Causes severe skin burns. Inhalation: May cause respiratory track irritation. Ingestion: Harmful if swallowed. Swallowing can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract. Delayed effects may include cardiovascular disturbances, liver damage, kidney damage, metabolic acidosis, cerebral coma and death.

Acute oral toxicity ORAL LD_{50}: 900mg/kg [Rabbit], as hydrochloric acid
Acute vapor toxicity IHL-LC_{50}: 3124ppm [Rat]/1h, as hydrochloric acid
DERMAL LD_{50}: 1449mg/kg [Mouse], as hydrochloric acid
Acute oral toxicity ORAL LD_{50}: 316mg/kg [Rat], as iron chloride.

Carcinogenicity:
California prop 65: None

12. ECOLOGICAL INFORMATION

LC50 Gambusia affinis 96 hours: 282 mg/l (hydrochloric acid), LC50 Pimephales promeales (fathead minnow) 96 hours: 21.84 mg/l (iron chloride), EC50 Daphnia magna (Water flea) 48 hours: 9.6 mg/l (iron chloride).

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 3264
Shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Ferric chloride, Hydrochloric acid).
Hazard Class: 8
Packing group: PG III
Exceptions: Ltd Qty. ≤5L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-729-4) ferric chloride (231-595-7) hydrochloric acid. WHMIS (Canada): Corrosive liquid. DSCL (EEC): R22-Harmful is swallowed. R34-Causes burns. S36/37/39-Wear suitable protective clothing, gloves, and eye protection.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Sulfide Test Solution 3
Alternative names: Ammonium phosphate water solution.
Product Number: 19-20EA, A19-20, C19-20.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification:
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

2.2 Label elements, including precautionary statements
Signal word: Not classified
Hazards statements: Not classified
Precautionary statements: Not classified

Pictogram: Not classified

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	50-90%	Not classified
Ammonium phosphate	CAS#7783-28-0	10-50%	Not classified

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention if necessary.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develops.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Nonflammable liquid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Mop up the area.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: Not classified
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Appearance: Transparent
Odor: Slight ammonia odor
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: N/A
Autoignition: N/A

Boiling point: ≈100°C
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Not available
Specific gravity (H_2O = 1): ≈1 at 20°C
Percent volatile (%): 100%
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Not available.
Incompatibilities: Not available
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: May cause eye irritation. Skin: May cause skin irritation. Inhalation: May cause respiratory track irritation. Ingestion: No information available.

Toxicological data:
Oral LD_{50}: 6500mg/kg [Rat].
Dermal LD_{50}: >7950mg/kg [Rabbit].

Carcinogenicity:
California prop 65: Not listed.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: N/A
Hazard Class: N/A
Packing group: N/A
Exceptions: Ltd Qty. N/A

15. REGULATORY INFORMATION

TSCA-listed. WHMIS (Canada): Not controlled under WHMIS (Canada).

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Cyanide Test Solution 1
Alternative names: Silver nitrate water solution
Product Number: 19-7EA, A19-7, C19-7
1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Acute Aquatic Toxicity (Category 2), H401
Chronic Aquatic Toxicity (Category 2), H411

2.2 Label elements, including precautionary statements
Signal word: Not classified
Pictogram:
Hazards statements: H401– Toxic to aquatic life, H411-Toxic to aquatic life with long lasting effects.
Precautionary statements: P273—Avoid release to the environment,P264 - Wash exposed skin thoroughly after handling, P280 - Wear protective gloves, eye protection.
2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	97.98.9%	Not classified
Ammonium citrate, dibasic	CAS# 7761-88-8	1-2%	Eye Irrit. 2A, H319
Silver nitrate	CAS# 7761-88-8	0.1-1%	Ox. Sol. 2, H272; Acute Tox. 4 (Oral), H302; Skin Corr. 1B H314; Eye Dam. 1, H318; Acute Aquatic 1, H400; Acute Chronic 1, H410, STOT RE 1, H372

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Nonflammable liquid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not applicable.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in an appropriate container. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: STEL: 0.01mg/m^3
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Colorless, Clear.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: N/A
Autoignition: N/A

Boiling point: ≈100°C
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Not available
Specific gravity (H_2O = 1): ≈1 at 20°C
Percent volatile (%): 100%
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Slightly reactive to reactive with reducing agents, combustible materials, organic materials, alkalis.
Hazardous decomposition: Not available
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Causes eye irritation. May cause conjunctivitis. Skin: Causes skin irritation. May cause dermatitis. May cause blackening of the skin. Inhalation: Can cause irritation of the respiratory tract and mucous membranes as mist. Ingestion: Can cause digestive/ gastrointestinal tract irritation. Symptoms may include irritation of the mouth, abdominal pain, blackening of the mucous membrane, vomiting. May affect kidneys (lesions of the kidneys, anuria), lungs (lesions of lungs). Other symptoms of acute silver poisoning may include shock, dizziness, vertigo, coma, convulsions, fall in blood pressure, decreased respiration, cyanosis. Chronic ingestion of low concentrations of silver nitrate can change the color of the skin, nails, body organs to bluish-grayish.
Toxicological data:

ORL LD_{50}: 1173mg/kg as silver nitrate [Rat]: 473mg/kg [Guinea pig]: 50mg/kg [mouse]
IHL-RAT LD_{50}: Not available
SKN-RABIT LD_{50}: Not available

Carcinogenicity: California prop 65: Not classified

12. ECOLOGICAL INFORMATION

LC50 Oncorhynchus mykiss(rainbow trout) 96 hours: 0.006 mg/l. LC50 Leuciscus idus(Golden orfe) 96 hours: 0.029 mg/l. EC50 Daphnia magna (Water flea) 48 hours: 0.0006 mg/l. as silver nitrate.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: N/A
Hazard Class: N/A
Packing group: N/A
Exceptions: Ltd Qty. N/A

15. REGULATORY INFORMATION

T5CA-listed, EINECS-listed (231-853-9) silver nitrate. DSCL (EEC) R36/38-Irritating to eyes and skin. WHMIS (Canada) CLASS D-2B: Material causing other toxic effects (TOXIC).

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Cyanide Test Solution 2
Alternative names: Not available.
Product Number: 19-8EA, A19-8, C19-8.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Eye Dam. (Category 1), H318; Skin Corr. (Category 1), H314
Flammable liquid (Category 2), H225
Corrosive to metals (Category 1), H290

Pictogram:

2.2 Label elements, including precautionary statements
Signal word: Danger
Hazards statements: H314 - Causes severe skin burns and eye damage,H225 - Highly flammable liquid and vapor, H290-May be corrosive to metals.
Precautionary statements: P264 - Wash exposed skin thoroughly after handling, P210 - Keep away from heat, hot surfaces, open flames, sparks, P280 - Wear protective gloves, eye protection. P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	70-86%	Not classified
Isopropanol	CAS# 67-63-0	10-20%	Flam. Liq. 2, H225; Eye Irrit. 2A ; STOT SE 3, H336
Sulfuric acid	CAS# 7664-93-9	4-10%	Skin Corr. 1 H314 ; Eye Dam. 1, H318; Acute Tox. 2, H330; Met. Corr. 1, H290.

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Flammable liquid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: When heated to decomposition emits toxic fumes. Flammable Vapors spread at floor level.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed hazardous waste container. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use under the hood, or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Store in a dedicated acid cabinet. Keep container in cool, well-ventilated area. Keep away from open flames, sparks and heat.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: OSHA: TWA: 0.2mg/m³ (sulfuric acid), **ACGIH:** STEL: 980g/m³, (isopropanol), **USA OSHA:** TWA: 490g/m³, (isopropanol)
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Transparent.
Odor: Alcohol
pH: Acidic
Vapor Pressure (mm Hg): 32.4 at 20 °C/68°F (Isopropyl alcohol)
Vapor Density: the Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: 12°C/53.6°F (isopropyl alcohol)
Autoignition: 399 °C/750.2°F (Isopropyl alcohol

Boiling point: 82°C/180°F (isopropyl alcohol)
Melting point: -89.5°C/-129.1°F (isopropyl alcohol)
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water and alcohol
Specific gravity (H_2O = 1): 0.786 g/cm³ (isopropyl alcohol)
Percent volatile (%): Not available
Molecular formula: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: High temperatures, sparks open flames and incompatible materials.
Incompatibilities: Slightly reactive with oxidizing agents, reducing agents, organic materials, acids, alkalis.
Corrosive to metals.
Hazardous decomposition: When heated to decomposition, emits toxic fumes.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Causes severe eye irritation with possible burns. May cause irreversible eye injury. Skin: Causes severe skin irritation with possible burns. Inhalation: Not expected to cause adverse effects under normal use. Ingestion: Causes gastrointestinal tract burns. May cause permanent damage to the digestive tract.

Toxicological data:
Oral LD_{50}: 2140mg/kg [Rat]. Sulfuric acid
Dermal LD_{50}: Not available
Inhalation, Mist LC_{50}: 510mg/kg 2h [Rat]. Sulfuric acid
Inhalation, Gases LC_{50}: 347ppm 1h [Rat]. Sulfuric acid
ORAL LD_{50}Isopropyl alcohol: 5045mg/kg [Rat]. 3600mg/kg [Mouse]. 6410 mg/kg [Rabbit]
DERMAL LD_{50}Isopropyl alcohol: 12800 mg/kg 4h [Rabbit]

Carcinogenicity: California prop 65: Not listed.

12. ECOLOGICAL INFORMATION

LC_{50} Brachydanio rerio 500mg/L 96h as sulfuric acid.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 2924
Shipping name: Flammable liquid, corrosive, n.o.s.
Hazard Class: 3, 8
Packing group: PG II
Exceptions: Lty Qty ≤1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-639-5) sulfuric acid. WHMIS (Canada): CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS E: Corrosive liquid. DSCL (EEC) R34-Causes burns.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Iron Test Solution
Alternative names: Sulfuric acid water solution.
Product Number: 19-9EA, A19-9, C19-9

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Skin Corr. (Category 1), H314
Eye Dam. (Category 1), H318
Corrosive to metals (Category 1), H290
2.2 Label elements, including precautionary statements
Signal word: Danger
Pictogram: 
Hazards statements: H314 - Causes severe skin burns and eye damage,H290-May be corrosive to metals.
Precautionary statements: P264 - Wash exposed skin thoroughly after handling, P280 - Wear protective gloves, eye protection. P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	90-96%	Not classified
Sulfuric acid	CAS# 7664-93-9	4-10%	Skin Corr. 1 H314 ; Eye Dam. 1, H318; Acute Tox. 2, H330; Met. Corr. 1, H290.

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Nonflammable liquid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: When heated to decomposition emits toxic fumes.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed hazardous waste container. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use under the hood, or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Store in a dedicated acid cabinet. Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: OSHA: TWA: 0.2mg/m^3 for sulfuric acid.
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Appearance: Transparent clear.
Odor: No odor
pH: <1
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: N/A
Autoignition: N/A

Boiling point: Not available
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water.
Specific gravity (H_2O = 1): Not available
Percent volatile (%): Not available
Molecular formula: Not available
Molecular weight: Not available

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatibles.
Incompatibilities: Slightly reactive with oxidizing agents, reducing agents, organic materials, acids, alkalis. Corrosive to metals.
Hazardous decomposition: When heated to decomposition, emits toxic fumes.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Causes severe eye irritation with possible burns. May cause irreversible eye injury. Skin: Causes severe skin irritation with possible burns. Inhalation: Not expected to cause adverse effects under normal use. Ingestion: Causes gastrointestinal tract burns. May cause permanent damage to the digestive tract.

Toxicological data:

Oral LD_{50}: 2140mg/kg [Rat]. Sulfuric acid
Dermal LD_{50}: Not available
Inhalation, Mist LC_{50}: 510mg/kg 2h [Rat]. Sulfuric acid
Inhalation, Gases LC_{50}: 347ppm 1h [Rat]. Sulfuric acid

Carcinogenicity: Not listed.
California prop 65: Not listed

12. ECOLOGICAL INFORMATION

LC_{50} Brachydanio rerio 500mg/L 96h as sulfuric acid.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: UN2796
Shipping name: Sulfuric acid, solution.
Hazard Class: 8
Packing group: II
Exceptions: Lt. Qty. 1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-639-5) sulfuric acid. WHMIS (Canada): CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS E: Corrosive liquid. DSCL (EEC) R34-Causes burns.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Iron Indicator Powder
Alternative names: Ammonium thiocyanate.
Product Number: 19-10EA, A19-10, C19-10.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only.

1.3 Details of the supplier of the safety data sheet
Company: Lab-Aids, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA.
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268.

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification:
Acute Toxicity, Oral (Category 4), H302
Acute Toxicity, Inhalation (Category 4), H332
Acute Toxicity, Dermal (Category 4), H302
Acute Aquatic Toxicity (Category 2), H401; Chronic Aquatic Toxicity (Category 3), H412

2.2 Label elements, including precautionary statements
Signal word: Warning
Pictogram:
Hazards statements: H302–Harmful if swallowed, H332-Harmful if inhaled, H312-Harmful in contact with skin. H401-Toxic to aquatic life, H412-Harmful to aquatic life with long lasting effects.
Precautionary statements: P264 - Wash skin thoroughly after handling, P280 - Wear protective gloves, eye protection. P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell, P273—Avoid release to the environment.
2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Yes
3.2 Mixture: N/A

Chemical Name	Product identifier	%	GHS-US classification
Ammonium thiocyanate	CAS# 1762-95-4	100%	Acute Tox. 4, H302; Acute Tox. 4, H332; Acute Tox. 4, H312; Acute Aquatic 2, H401; Chronic Aquatic 3, H412.

3.3 Chemicals where a trade secret is claimed: None.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if necessary.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: carbon oxides, sulfur oxides, nitrogen oxides when heated to decomposition.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Sweep up and recover if not contaminated, or place for disposal. Avoid formation of dust. Wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area. Keep It tightly closed.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: None.

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.

Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Granular or powdered solid.
Appearance: White.
Odor: Odorless
pH: 4.0-5.5 at 76.1g/l
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: Not available
Autoignition: Not available

Boiling point: Not available
Melting point: 149.6°C (301.3°F)
Freezing point: Not available
Decomposition temp: Decomposes at 58°C (136°F)
Solubility: Soluble in water
Specific gravity (H_2O = 1): 1.305
Percent volatile (%): Not available
Molecular formula: NH_4SCN
Molecular weight: 76.12g/mol

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Acids, metals, potassium chlorate, lead nitrate.
Hazardous decomposition: Not available
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: No data available. Skin: No data available. Inhalation: No data available. Ingestion: Harmful if swallowed.

Toxicological data:
ORAL LD_{50}: 750mg/kg [Rat]. 500mg/kg [Mouse
Acute dermal toxicity LD_{50} not available.
Acute vapor toxicity LC_{50}: not available

Carcinogenicity:
California prop 65: Not listed.

12. ECOLOGICAL INFORMATION

Ecotoxicity in water: (LC_{50}): 65mg/l 96 hrs Oncorhynchus mykiss (Rainbow trout). (EC_{50}): 3.56mg/l 48 hrs Daphnia magna (water flea).

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: Not available
Shipping name: Not controlled.
Hazard Class: N/A
Packing group: N/A
Exceptions: N/A

15. REGULATORY INFORMATION

TSCA-listed. WHMIS (Canada): Not controlled under WHMIS (Canada). DSCL (EEC) R20/21/22– Harmful by inhalation, in contact with skin and if swallowed. R36/37/38–Irritating to eyes, respiratory system, and skin.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Lab-Aids, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond Lab-Aids, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Ammonia Test Solution 1
Alternative names: Potassium sodium tartrate water solution.
Product Number: 19-1EA, A19-1, C19-1.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification:
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

2.2 Label elements, including precautionary statements
Signal word: Not classified
Hazards statements: Not classified
Precautionary statements: Not classified
Pictogram: Not classified

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	50-90%	Not classified
Potassium sodium tartrate	CAS#6381-59-5	10-50%	Not classified

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention if necessary.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develops.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Nonflammable liquid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Mop up the area.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: Not classified
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Transparent.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: N/A
Autoignition: N/A

Boiling point: ≈100°C
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Not available
Specific gravity (H_2O = 1): ≈1 at 20°C
Percent volatile (%): 100%
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Not available.
Incompatibilities: Not available
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: No information available. Skin: No information available. Inhalation: No information available. Ingestion: No information available.

Toxicological data:
Acute oral toxicity ORAL LD_{50}: Not available
Acute vapor toxicity IHL-LC_{50}: Not available
DERMAL LD_{50}: Not available

Carcinogenicity:
California prop 65: Not listed.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: N/A
Hazard Class: N/A
Packing group: N/A
Exceptions: Ltd Qty. N/A

15. REGULATORY INFORMATION

TSCA-listed.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Ammonia Test Solution 2
Alternative names: Nessler Reagent.
Product Number: 19-2EA, A19-2, C19-2.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only.

1.3 Details of the supplier of the safety data sheet
Company: Lab-Aids, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA.
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268.

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Acute toxicity, oral (Category 3) H301, Acute toxicity, dermal (Category 3) H311
Acute toxicity, inhalation (Category 4) H332; Eye Dam, Skin Corr. (Category 1)H314
Specific Target Organ toxicity, Single Exposure (Category 2), H371
Aquatic Acute (Category 2) H401, Aquatic chronic (Category 2), H411
2.2 Label elements, including precautionary statements
Signal word: Danger

Pictogram:

Hazards statements: H301-Toxic if swallowed, H311–Toxic in contact with skin, H332-Harmful if inhaled, H314-Causes severe skin burns and eye damage, H371– May cause damage to organs CNS, kidneys in contact with skin, and ingestion. H411-Toxic to aquatic life with long lasting effects,
Precautionary statements: P264 - Wash skin thoroughly after handling, P280 - Wear protective gloves, eye protection, P273-Avoid release to the environment, P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
2.3 Hazards not otherwise classified: none.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: N/A
3.2 Mixture: Yes

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	67%	Not classified
Sodium hydroxide	CAS# 1310-73-2	16%	Acute Tox. 4, H312; Skin Corr. 1A, H314; Eye Dam. 1, H314; Acuatic Acute 3, H402
Mercuric iodide	CAS# 7774-29-0	10%	Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; STOT SE 2, H371; Acuatic Acute 1, H400; Aquatic Chronic 1, H410
Potassium iodide	CAS# 7681-11-0	7%	Eye Irrit. 2B, H320; Acute Tox. 4, H302

3.3 Chemicals where a trade secret is claimed: None.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get immediate medical attention.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get immediate medical attention.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use extinguishing methods for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Thermal decomposition generates corrosive and toxic fumes.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a chemical waste container. Avoid breathing mists and vapors. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Use hood or with adequate ventilation. Do not breathe mist and vapors. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area. Keep It tightly closed.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 0.025mg/m³ (Mercuric iodide),

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.

Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Appearance: Yellow
Odor: Odorless
pH: >12
Vapor Pressure (mm Hg): not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: Not available
Autoignition: Not available

Boiling point: Not available
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): Not available
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: metals, organic materials, reducing agents, oxidizing agents, acids, alkalies.
Hazardous decomposition: not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: Causes severe eye irritation and burns. May cause chemical conjunctivitis and corneal damage. Skin: Causes severe eye irritation and burns. May cause deep penetrating ulcers. Harmful if absorbed through skin. Inhalation: Harmful if inhaled. Inhalation of mist or vapors are irritating to respiratory tract. Inhalation of vapors can cause coughing, chocking, inflammation of the nose, throat, and upper respiratory tract. Ingestion: Toxic! Harmful if swallowed. Swallowing causes immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract. California prop.65: This product contains Mercuric Iodide for which the State of California has found to cause cancer and birth defects.

Toxicological data:
ORAL LD_{50}: 18mg/kg [Rat], as Mercuric iodide
DERMAL LD_{50}: 75mg/kg [Rat], as Mercuric iodide
Lowest Published Lethal Dose
ORAL LD_{50}: 500mg/kg [Rabbit], as Sodium hydroxide
ORAL LD_{50}: 916mg/kg [Rabbit], as Potassium iodide

Carcinogenicity: California prop 65: Mercuric iodide.

12. ECOLOGICAL INFORMATION

EC50 Daphnia magna 2.7mg/l, 120h, as mercuric iodide.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 2922
Shipping name: Corrosive liquid, toxic, n.o.s. (Sodium Hydroxide and Mercuric Iodide).
Hazard Class: 8, 6.1
Packing group: PG II
Exceptions: Ltd Qty. ≤1L

15. REGULATORY INFORMATION

TSCA-listed. WHMIS (Canada) CLASS D-1B: Material causing immediate and serious toxic effects. (VERY TOXIC). CLASS E: Corrosive liquid. DSCL (EEC): R34-Causes burns, R25-Toxic if swallowed. R21-Harmful in contact with skin.
S36/37/39-Wear suitable protective clothing, gloves and eye protection.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Lab-Aids, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond Lab-Aids, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Copper Test Solution 1
Alternative names: Not available.
Product Number: 19-5EA, A19-5, C19-5.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification:
Acute Toxicity, Oral (Category 4), Metal Corrosion (Category 1), H290
Eye Irrit. (Category 2) H319; Skin Irrit. (Category 2), H315
Skin Sensitization (Category 1B), H317; Carcinogenicity (Category 2), H351
Specific Target Organ Toxicity, Repeated Exposure (Category 2) H373

2.2 Label elements, including precautionary statements:
Signal word: Danger
Pictogram:

Hazards statements: H302-Harmful if swallowed, H319– Causes serious eye irritation, H315– Causes skin irritation, H317-May cause an allergic skin reaction, H351-Suspected of causing cancer. H373-May cause damage to organs: blood, liver, kidney, and bone marrow damage through prolonged or repeated exposure: Oral. H290-May be corrosive to metals.
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling. P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	57.7-77.7%	Not classified
Sodium Citrate	CAS# 6132-04-3	10-30%	Not classified
Hydrochloric acid	CAS# 7647-01-0	2.3%	Acute Tox. 4, H302; Skin Corr. 1A H314; Eye Dam. 1, H318; STOT SE 3, H335
Hydroxylamine Hydrochloride	CAS# 5470-11-1	10%	Acute Tox. 3, H301; Acute Tox. 4, H312; Skin Irrit. 2 H315; Eye Irrt. 2A, H319; Skin Sens. 1B, H317; Carc. 2, H351; STOT SE 3, H335; STOT RE 2, H373; Met. Corr. 1, H290 H335Aquatic Acute 2, H401, Aquatic Chronic 2, H411.

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:

INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develops.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Thermal decompositions generates corrosive vapors.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a chemical waste container. Dispose of in accordance with you local regulations. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Acid cabinet. Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 2 ppm (hydrochloric acid)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Colorless.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 537.2 °C (hydrochloric acid)
Autoignition: Not available

Flammability: Not available
Boiling point: 37.08°C estimated (hydrochloric acid)
Melting point: -114.22°C (-173.6° F)
Freezing point: 3.33°C (38° F)
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): 1.18 g/cm^3 @ 25°C (hydrochloric acid)
Percent volatile (%): 66% estimated (hydrochloric acid)
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Alkali metals, metals, organic materials, strong oxidizing agents, amines.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye irritation. Skin: Causes skin irritation. Inhalation: Not expected to cause acute effects. Ingestion: Ingestion: Harmful if swallowed. Hydroxylamine is a blood toxin. Prolonged or repeated exposure by ingestion may result in conversion of hemoglobin to methemoglobin producing cyanosis.

Acute oral toxicity ORAL LD_{50}: 900mg/kg [Rabbit], as hydrochloric acid
Acute vapor toxicity IHL-LC_{50}: 3124ppm [Rat]/1h, as hydrochloric acid
DERMAL LD_{50}: 1449mg/kg [Mouse], as hydrochloric acid
Acute oral toxicity ORAL LD_{50}: 141mg/kg [Rat], as hydroxylamine hydrochloride

Carcinogenicity:
California prop 65: Not listed

12. ECOLOGICAL INFORMATION

LC50 (Gambusia affinis) 96 hours: 282 mg/l (hydrochloric acid)

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 3264
Shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (hydrochloric acid)
Hazard Class: 8
Packing group: PG III
Exceptions: Ltd Qty. ≤5L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-595-7) hydrochloric acid, (226-798-2) Hydroxylamine hydrochloride.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Copper Test Solution 2
Alternative names: Not available.
Product Number: 19-6EA, A19-6, C19-6.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification:
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

2.2 Label elements, including precautionary statements
Signal word: Not classified
Hazards statements: Not classified
Precautionary statements: Not classified

Pictogram: Not classified

2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	99-99.9%	Not classified
Bathocuroinedisulfonic acid, disodium salt	CAS#52698-84-7	0.1-1%	Not classified

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention if necessary.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develops.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Nonflammable liquid
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Mop up the area.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area.

7.3 Incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: Not classified
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Clear to yellow.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: N/A
Autoignition: N/A

Boiling point: ≈100°C
Melting point: Not available
Freezing point: Not available
Decomposition temp: Not available
Solubility: Not available
Specific gravity (H_2O = 1): ≈1 at 20°C
Percent volatile (%): 100%
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Not available.
Incompatibilities: Not available
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: No information available. Skin: No information available. Inhalation: No information available. Ingestion: No information available.

Toxicological data:
Acute oral toxicity ORAL LD_{50}: Not available
Acute vapor toxicity IHL-LC_{50}: Not available
DERMAL LD_{50}: Not available

Carcinogenicity:
California prop 65: Not listed.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: N/A
Hazard Class: N/A
Packing group: N/A
Exceptions: Ltd Qty. N/A

15. REGULATORY INFORMATION

TSCA-listed.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Chromium Extracting Solution
Alternative names: Hydrochloric Acid, 6M, Hydrochloric acid water solution.
Product Number: 19-4AEA, A19-4A, C19-4A.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Acute Tox. Oral (Category 4), H302
Skin Corr. (Category 1A) H314
Eye Dam. (Category 1) H318
Specific target organ toxicity –single exposure (Category 3) H335

Pictogram:

2.2 Label elements, including precautionary statements
Signal word: Danger
Hazards statements: H302 - Harmful if swallowed, H314– Causes severe skin burns and eye damage. H335– May cause respiratory irritation.
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling.
2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	79.2%	Not classified
Hydrochloric acid	CAS# 7647-01-0	20.8%	Acute Tox. 4, H302; Skin Corr. 1A H314; Eye Dam. 1, H318; STOT SE 3, H335

3.3 Chemicals where a trade secret is claimed: none

4. FIRST AID MEASURE

4.1 Description of the first aid measure:

INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation or burns develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Thermal decompositions generates corrosive vapors.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.

6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed container. Dispose of in accordance with you local regulations. Small spills neutralize with acid neutralizer, or sodium hydroxide solution and mop up the area. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Acid cabinet. Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 2 ppm (hydrochloric acid)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Colorless to slightly yellow.
Odor: Pungent
pH: <2
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 537.2 °C (hydrochloric acid)
Autoignition: Not available

Flammability: Not available
Boiling point: 37.08°C estimated (hydrochloric acid)
Melting point: -114.22°C (-173.6° F)
Freezing point: 3.33°C (38° F)
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): 1.18 g/cm^3 @ 25°C (hydrochloric acid)
Percent volatile (%): 66% estimated (hydrochloric acid)
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Alkali metals, metals, organic materials, strong oxidizing agents, amines.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye burns and eye damage. Skin: Causes severe skin burns. Inhalation: May cause respiratory track irritation. Ingestion: Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract.

Acute oral toxicity ORAL LD_{50}: 900mg/kg [Rabbit], as hydrochloric acid
Acute vapor toxicity IHL-LC_{50}: 3124ppm [Rat]/1h, as hydrochloric acid
DERMAL LD_{50}: 1449mg/kg [Mouse], as hydrochloric acid

Carcinogenicity:
California prop 65: None

12. ECOLOGICAL INFORMATION

LC50 (Gambusia affinis) 96 hours: 282 mg/l (hydrochloric acid)

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 1789
Shipping name: Hydrochloric acid
Hazard Class: 8
Packing group: PG II
Exceptions: Ltd Qty. ≤1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-595-7). WHMIS (Canada): CLASS E: Corrosive liquid. DSCL (EEC) R34-Causes burns.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Chromium Indicator Powder
Alternative names: Sodium chloride mixture.
Product Number: 19-4EA, A19-4, C19-4.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: Lab-Aids, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number: Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Skin Sensitizer (Category 1),H317

Pictogram:

2.2 Label elements, including precautionary statements
Signal word: Warning
Hazards statements: H317-May cause an allergic skin reaction
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling.

2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: white crystals
3.2 Mixture: N/A

Chemical Name	Product identifier	%	GHS-US classification
Sodium chloride	CAS#7647-14-5	99.2%	Not classified
Proprietary ingredient 1	Trade Secret	0.1-0.4%	Eye Irrit. 2A, H319; Skin Irrit. 2, H315; STOT SE 3, H33S
Proprietary ingredient 2	Trade Secret	0.1-0.4%	Eye Irrit. 2A, H319; Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Acute 3, H402

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:

INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention if large quantities ingested.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media:
Suitable extinguishing media: Use TriClass, dry chemical extinguisher for surrounding fires.
5.2 Special hazard arising from the substance or mixture: Not available.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Recover for use if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing dust. Use with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Keep container in cool, well-ventilated area. Store in closed container in a dry area. Avoid moisture.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: Not classified
8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.
Appearance: White to pinkish crystals.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: N/A
Flash point: N/A
Autoignition: N/A

Boiling point: 2575°F/1413°C
Melting point: 1473°F/801°C
Freezing point: N/A
Decomposition temp: N/A
Solubility: soluble in water, glycerol; slightly in alcohol
Specific gravity (H_2O = 1): 2.165g/cc
Percent volatile (%): N/A
Molecular formula: NaCl
Molecular weight: 58.44

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials, High temperatures.
Incompatibilities: Reactive with oxidizing agents, metals and acids.
Hazardous decomposition: When heated to decomposition, emits toxic fumes of chlorine and sodium oxide.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eyes: May cause eye irritation . Skin: Not expected to cause any acute effects. Inhalation: Not expected to cause irritation to the respiratory tract and mucous membrane. Ingestion: Ingestion of large quantities may lead to salt poisoning.

Toxicological data
ORL-RAT LD_{50}: 3000mg/kg
IHL-RAT LD_{50}: >42000mg/kg 1hr
SKN-RABIT LD_{50}: >10000mg/kg

Carcinogenicity:
California prop 65: Not classified

12. ECOLOGICAL INFORMATION

Not available.

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: N/A
Shipping name: Not regulated
Hazard Class: N/A
Packing group: N/A
Exceptions: N/A

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-598-3)

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Lab-Aids, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond Lab-Aids, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Chlorine Test Solution
Alternative names: Acidified o-Tolidine water solution.
Product Number: 19-3EA, A19-3, C19-3, EHR-1-5EA, C1-1-08xx, C1-B-08

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification
Eye Irrit. (Category 2) H319
Skin Irrit. (Category 2) H315
Carcinogenicity (Category 1B), H350


Pictogram:

2.2 Label elements, including precautionary statements
Signal word: Danger
Hazards statements: H319– Causes serious eye irritation, H315– Causes skin irritation. H350-May cause cancer.
Precautionary statements: P280 - Wear protective gloves, eye protection, P264 - Wash exposed skin thoroughly after handling.
P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

2.3 Hazards not otherwise classified: none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS# 7732-18-5	96.42%	Not classified
Hydrochloric acid	CAS# 7647-01-0	2.3%	Acute Tox. 4, H302; Skin Corr. 1A H314; Eye Dam. 1, H318; STOT SE 3, H335
O-Tolidine dihydrochloride	CAS# 612-82-8	0.1-0.8%	Acute Tox. 4, H302; Carc. 1B, H350; Aquatic Acute 2, H401, Aquatic Chronic 2, H411.

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation.

4. FIRST AID MEASURE

4.1 Description of the first aid measure:

INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek immediate medical attention.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develops.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Not flammable
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Thermal decompositions generates corrosive vapors.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a chemical waste container. Dispose of in accordance with you local regulations. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.

7.2 Storage: Acid cabinet. Keep container tightly closed in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 2 ppm (hydrochloric acid)

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Colorless.
Odor: Not available
pH: Not available
Vapor Pressure (mm Hg): Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 537.2 °C (hydrochloric acid)
Autoignition: Not available

Flammability: Not available
Boiling point: 37.08°C estimated (hydrochloric acid)
Melting point: -114.22°C (-173.6° F)
Freezing point: 3.33°C (38° F)
Decomposition temp: Not available
Solubility: Miscible in water
Specific gravity (H_2O = 1): 1.18 g/cm³ @ 25°C (hydrochloric acid)
Percent volatile (%): 66% estimated (hydrochloric acid)
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Incompatible materials.
Incompatibilities: Alkali metals, metals, organic materials, strong oxidizing agents, amines.
Hazardous decomposition: Not available.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes severe eye irritation. Skin: Causes skin irritation. Inhalation: Not expected to cause acute effects. Ingestion: It may cause gastro-intestinal tract irritation. May be harmful if swallowed. California prop.65: This product contains o-Tolidine for which the State of California has found to cause cancer, birth defects, and other reproductive

Acute oral toxicity ORAL LD_{50}: 900mg/kg [Rabbit], as hydrochloric acid
Acute vapor toxicity IHL-LC_{50}: 3124ppm [Rat]/1h, as hydrochloric acid
DERMAL LD_{50}: 1449mg/kg [Mouse], as hydrochloric acid
Acute oral toxicity ORAL LD_{50}: 404mg/kg [Rat], as o-Tolidine

Carcinogenicity:
California prop 65: 3,3'-Dimethylbenzidine dihydrochloride

12. ECOLOGICAL INFORMATION

LC50 (Gambusia affinis) 96 hours: 282 mg/l (hydrochloric acid)

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 3264
Shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (hydrochloric acid)
Hazard Class: 8
Packing group: PG III
Exceptions: Ltd Qty. ≤5L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-595-7) hydrochloric acid, (210-322-5) 3,3'-Dimethylbenzidine dihydrochloride.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

1. IDENTIFICATION

1.1 Product Identifiers
Product Name: Universal Indicator
Alternative names: Universal Indicator alcohol based solution.
Product Number: 81R-11EA, A81R-11, C81R-11, 19-21EA, A19-21, C19-21

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For laboratory and educational use only

1.3 Details of the supplier of the safety data sheet
Company: LAB-AIDS®, Inc, 17 Colt Ct., Ronkonkoma, NY 11779, USA
Telephone: +1 800 381 8003.
Fax: +1 631 820 8268

1.4 Emergency telephone number
Emergency number: CHEMTREC 1 800 424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS classification:
Flam. Liq. (Category 2), H225; Carcinogenicity (Category 2), H351
Eye Irrit. (Category 2A) H319; Acute Tox., Oral, (Category 4), H302
Acute Tox. Inhalation, (Category 4), H332; Acute Tox. Dermal (Category 4), 312
Specific Target Organ Toxicity, Single Exposure, Oral (Category 3), H336
2.2 Label elements, including precautionary statements:
Signal word: Danger
Pictogram:

Hazards statements: H225 - Highly flammable liquid and vapor, H336– May cause drowsiness or dizziness, H351-Suspected of causing cancer, H319-Causes serious eye irritation, H302-Harmful if swallowed, H312-Harmful in contact with skin, H332-Harful if inhaled.
Precautionary statements: P210 - Keep away from heat, hot surfaces, open flames, sparks, P280 - Wear protective gloves, eye protection, P301+P312+330-IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
2.3 Hazards not otherwise classified: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Not applicable
3.2 Mixture:

Chemical Name	Product identifier	%	GHS-US classification
Water	CAS 7732-18-5	52.6%	Not classified
Ethyl alcohol	CAS# 64-17-5	41.8%	Flam. Liq. 2, H225; STOT SE 3, H336; Eye Irrit. 2A, H319
Methanol	CAS# 67-56-1	2.4%	Flam. Liq. 2, H225; Acute Tox. 3, H301+H302+H303
Ethyl Acetate	CAS# 141-78-6	1.8%	Flam. Liq. 2, H225; Skin Irrit. 2, H315; Eye Irrit. 2A, H319
Methyl isobutyl ketone	CAS# 108-10-1	0.4%	Flam. Liq. 2, H225; Eye Irrit. 2A, H319; Carc. 2, H351
Universal Indicator	Trade Secret	0.5-1%	Eye Irrit. 2A, H319, STOT SE 3, H335

3.3 Chemicals where a trade secret is claimed: Any concentration shown as a range is to protect confidentiality, or is it due to batch variation

4. FIRST AID MEASURE

4.1 Description of the first aid measure:
INGESTION: Never give anything by mouth to unconscious person. Rinse mouth and get conscious person drink a glass of milk or water. Do NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.
INHALATION: Remove to fresh air. Get medical attention if necessary.
EYE CONTACT: Wash immediately with plenty of water, and continue washing for at least 15min., occasionally lifting upper and lower eyelids. Seek medical attention if necessary.
SKIN CONTACT: Flush thoroughly with mild soap and water. Remove contaminated clothing. Get medical attention if irritation develop.
4.2 Most important symptoms and effects, both acute and delayed: Refer to section 11.

4.3 Indication of any immediate medical attention and special treatment needed: No additional information available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media: Flammable liquid.
Suitable extinguishing media: Use water spray, alcohol-resistant foam, or TriClass, dry chemical extinguisher.
5.2 Special hazard arising from the substance or mixture: Vapor spreads at floor level. Flash back possible over considerable distance.
5.3 Advice for firefighters: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions: Wear laboratory grade gloves, eye protection and a lab coat.
6.2 Emergency procedures: Restrict unprotected personnel from the area.
6.3 Methods and material used for containment and cleanup procedure: Contain the spill with an inert absorbent material and deposit in a sealed container. For small spill use paper towel. Dry material place in trash. Ventilate and wash spill area with soap and water.

7. HANDLING AND STORAGE

7.1 Precaution for safe handling: Read label on container before using. Keep away from heat, sparks and flame. Vapor forms from this product and may travel, or be moved by air currents and ignited by pilot lights, static discharges , flames, sparks, heaters or other ignition sources. Ensure all equipment is electrically grounded before beginning transfer operations.
Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Use only under adult supervision. Avoid breathing vapor. Use hood or with adequate ventilation. Wash hands thoroughly after handling.
7.2 Storage: Flammable cabinet. Keep container in cool, well-ventilated area.

7.3 incompatibility: Refer to section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: ACGIH: TWA: 400ppm (Ethyl Acetate); **USA OSHA:** TWA: 200ppm (Methanol); **ACGIH:** TWA: 1000ppm (Ethanol).

8.2 Exposure controls: Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits.
Respiratory protection: Non should be needed if normal laboratory handling at room temperature.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Appearance: Green or red orange.
Odor: Strong alcohol odor
pH: Not available
Vapor Pressure (mm Hg): 66.661hPa
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Flash point: 13 °C (55 °F)
Autoignition: ca. 400 °C, 752 °F; ASTM D 2155

Flammability: Explosion limits: Lower: 3.3% **Upper:** 19.0%
Boiling point: 74-80 °C (165.2-176 ° F)
Melting point: -114°C (-173° F)
Freezing point: Not available
Decomposition temp: Not available
Solubility: Miscible in water and many organic solvents
Specific gravity (H_2O = 1): 0.79 g/cm3 @ 15.5 °C, 60 °F
Percent volatile (%): Not available
Molecular formula: Mixture
Molecular weight: Mixture

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: High temperatures, sparks open flames and incompatible materials.
Incompatibilities: Strong oxidizing agents, acids, peroxides, acid chlorides, acid anhydrides, alkali metals, ammonia.
Hazardous decomposition: N/A
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects: Eye: Causes eye irritation. Skin: May cause mild skin irritation. May be absorbed through skin. Inhalation: Inhalation of high concentration may affect CNS characterized by headache, dizziness, confusion, and loss of coordination. Ingestion: May be harmful if swallowed. Ingested doses will produce nausea, dizziness and headache. May affect behavior, brain, CNS.

Toxicological data:
ORAL LD_{50}: 2000mg/kg [Rat] (Ethanol)
VAPOR LC_{50}: >20 mg/l [Mouse] 4h (Ethanol)
DERMAL LD_{50}: >2000mg/kg [Rabbit] (Ethanol)

ORAL LD_{50}Methyl alcohol: >50-300 mg/kg [Rat].
VAPOR LC_{50}Methyl alcohol: >2-10 mg/l [Rat].
DERMAL LD_{50}Methyl alcohol: >200-1000 mg/kg [Rabbit]

ORAL LD_{50}: >2000mg/kg [Rat] (Ethyl Acetate)
VAPOR LC_{50}: Not available
DERMAL LD_{50}: >2000mg/kg [Rabbit] (Ethyl Acetate)

ORAL LD_{50}MIBK: >2000 mg/kg [Rat].
VAPOR LC_{50}MIBK: >10-20 mg/l 4h [Rat].
DERMAL LD_{50}MIBK: >2000 mg/kg [Rabbit]

Carcinogenicity:
California prop 65: Methanol, Methyl isobutyl ketone.

12. ECOLOGICAL INFORMATION

LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; flow-through test Test substance: Ethanol;
LC50 (Pimephales promelas (fathead minnow)) 96 hours: 29,400 mg/l Test substance: Methanol;
LC50 (Pimephales promelas (fathead minnow)) 96 hours: > 100 mg/l; semi-static test Test substance: Ethyl Acetate;
LC50 (Danio rerio (zebra fish)) 96 hours: > 100 mg/l; static test, Test substance MIBK

13. DISPOSAL CONSIDERATION

Disposal of in accordance with all local, state, and federal regulations, or contact with a licensed chemical disposal agency.

14. TRANSPORT INFORMATION

UN number: 1987
NA: N/A
Shipping name: ALCOHOLS, NOS
Hazard Class: 3
Packing group: PG II
Exceptions: Lty Qty ≤1L

15. REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-578-6) ethanol, (200-659-6) methanol, (205-500-5) Ethyl Acetate, (203-550-1) MIBK. WHMIS (Canada): Class B, Division 2: Flammable liquid. Class D, Division 2, Subdivision A: Very toxic material. Class D, Division 2, Subdivision B: Toxic material.

16. OTHER INFORMATION

Disclaimer:

The Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. LAB-AIDS® makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration , investigation and verification. The data should not be confused with local, state, federal regulations, or insurance mandates, and CONSTITUTE NO WARRANTY. Any use of these data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling , storage, use and disposal of the product(s) described are beyond LAB-AIDS, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).