



SAFETY DATA SHEET

1. Identification of the Substance and Company

Klenz Line Test Kit

Product No. EQ0432
MSDS No. Q100

NFPA 704 HAZARD RATING:
HEALTH: ND
FIRE: ND
REACTIVITY: ND

Prepared by: M. Ebers
asksteris_msd@steris.com
Date Created: April 1, 2002
Date Reviewed: March 14, 2008

Date Revised: March 14, 2008

STERIS Corporation, P. O. Box 147, St. Louis, MO 63166, US
Emergency Telephone No. 1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)
Telephone Number for Information: 1-800-444-9009 (Customer Service-Scientific Products)

PRODUCT NAME	PRODUCT NUMBER
Indicator A	EQ0816
Titration Acid	EQ0817
Indicator B	EQ0821
Acid 5	EQ0822
Acid 1	EQ0824

Shipping Information:
Consumer Commodity ORM-D II



PRODUCT SAFETY DATA SHEET

1. Identification of the Substance and Company

Indicator A

Product No. EQ0816

MSDS No. Q101

Prepared by: M. Ebers

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Date Created: April 1, 2002

Date Revised: March 14, 2008

Date Reviewed: March 14, 2008

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2. Hazards Identification

Flammable. Irritant.

3. Composition/Information on Ingredients

Hazardous Component(s)	EEC No.	CAS No.	% By Wt.	Symbol	R Phrases
Isopropyl alcohol	NA	67-63-0	50%	NA	NA
Phenolphthalein	NA	77-09-8	0.5%	NA	NA

4. First Aid Measures

Eye Contact: Flush eyes immediately with water for at least 20 minutes.

Ingestion: If swallowed, call physician.

Inhalation: Remove to fresh air.

5. Fire-Fighting Measures

Conditions of Flammability/Flash Point: 75F (24C) **Method:** TCC **F lammable Limits:** LEL: 2% UEL: 12%

Special Hazards: None known.

Explosability Data: None known.

Extinguishing Media: Dry chemical, foam, carbon dioxide

Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Wear self-contained (positive pressure if available) breathing apparatus and special protective clothing.

Hazard Combustion Products: None known.

6. Accidental Release Measures

Flush with water.

7. Handling and Storage

7.1 Handling

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

7.2 Storage

Keep away from heat, sparks and open flame. Store in a cool, dry area. Avoid direct sunlight.

8. Exposure Control/Personal Protection

8.1 Occupational Exposure Limits

Isopropyl alcohol: ACGIH TLV = 200 ppm and OSHA PEL = 400 ppm. ACGIH STEL = NE

Toxicity: LD50 (oral-rat): 5890 mg/kg

Phenolphthalein: ACGIH TLV and OSHA PEL = NE, ACGIH STEL = NE

Toxicity: LD (oral-rat): >1 gm/kg Suspect carcinogen.

8.2 Personal Protection/Respirator Protection: Not required.

Eye Protection: Safety glasses.

Protective Gloves: Disposable.

Other Protective Clothing and Equipment: Lab coat.

Engineering Controls/Ventilation: Local and mechanical exhaust recommended.

9. Physical and Chemical Properties

Solubility in Water: Soluble **Specific Gravity:** 0.79

Physical State/Appearance/Odor: Clear faint pink liquid/slight alcohol odor.

pH: 7.5-8.0

Odor Threshold/Vapor Pressure (mm Hg): 33mm @20C

Vapor Density (AIR=1): Unknown **Evaporation Rate:** Unknown

Boiling Point: 180F **Freezing point:** Unknown

Percent Volatile by Weight: 50

Coefficient of Water/Oil Distribution: NA

10. Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur.

Incompatible Materials: Strong oxidizers.

Conditions to Avoid/Conditions of Reactivity: Keep away from extreme heat, sparks and open flame. Avoid contact with strong oxidizers.

Hazardous Decomposition or Byproducts: None known.

11. Toxicological Information

11.1 Acute (Primary Routes of Exposure)

Eyes (Irritancy) : Causes irritation.

Skin: (Irritancy or Sensitization) : Causes irritation.

Inhalation: Causes irritation. May cause narcosis.

Ingestion: May be harmful if swallowed.

11.2 Long Term Exposure

Carcinogenicity: NTP: Yes IARC: Yes OSHA: Yes

Reproductive Toxicity/Teratogenicity/Mutagenicity/Toxicologically Synergistic Products: ND

12. Ecological Information:

None available

13. Disposal Considerations

Product may be flushed to a sanitary sewer with copious amounts of water, if in accordance with state, local and federal regulations. For additional guidance, contact the State Water Board or the Regional Office of the EPA.

14. Transport Information

None available.

15. Regulatory Information

None available.

16. Other Information

The information on this sheet is not a specification and does not guarantee specific properties. The information is intended to provide general knowledge as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product or where instruction or recommendations are not followed.

NA - Not Applicable

ND - Not Determined

NE - Not Established



PRODUCT SAFETY DATA SHEET

1. Identification of the Substance and Company

Titration Acid

Product No. EQ0817

MSDS No. Q102

NFPA 704 HAZARD RATING:

HEALTH: ND

FIRE: ND

REACTIVITY: ND

Prepared by: M. Ebers

asksteris_msds@steris.com

Date Created: April 1, 2002

Date Revised: March 14, 2008

Date Reviewed: March 14, 2008

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Telephone Number for Information: 1-800-444-9009 (Customer Service-Scientific Products)

2. Hazards Identification

Irritant: Causes eye burns and skin irritation.

3. Composition/Information on Ingredients

Hazardous Component(s)	EEC No.	CAS No.	% By Wt.	Symbol	R Phrases
Hydrochloric Acid	NA	7647-01-0	< 1%	NA	NA

* This chemical is subject to the reporting requirements of SARA Title III Section 313 and 40 CFR 372.

4. First Aid Measures

Eyes: Flush with water for at least 20 minutes. Contact a physician.

Skin: Flush with water. If irritation develops, contact a physician.

Ingestion: Do NOT induce vomiting. Call a physician. Give large quantities of water.

Inhalation: NA

5. Fire-Fighting Measures

Conditions of Flammability/Flash Point: None

Method: NA

Special Hazards: None

Explosibility Data: ND **Extinguishing Media:** Product is not flammable. Use media suitable for surrounding fire.

Special Fire Fighting Procedures: Normal precautions for fighting chemical fires should be observed.

Hazard Combustion Products: ND

6. Accidental Release Measures

Absorb with inert material or neutralize with soda ash.

7. Handling and Storage

7.1 Handling

Avoid contact with eyes, skin and clothing. Do not breathe mists. Wash thoroughly after handling.

7.2 Storage

Store in a cool, dry area. Avoid direct sunlight.

8. Exposure Control/Personal Protection

8.1 Occupational Exposure Limits

Hydrochloric Acid: ACGIH TLV and OSHA PEL = 5 ppm.

8.2 Personal Protection/Respirator Protection: Not normally required.

8.3 Eye Protection: Safety glasses or goggles.

Protective Gloves: Disposable. **Other Protective Clothing and Equipment:** Lab coat.

Engineering Controls/Ventilation: Normal Room Ventilation.

9. Physical and Chemical Properties

Solubility in Water: Complete

Specific Gravity: Unknown

Physical State/Appearance/Odor: Clear colorless liquid/no odor

pH as Distributed: 1.00

Percent Volatile by Weight: >99

Odor Threshold, Vapor Pressure, Vapor Density, Evaporation Rate, Boiling Point and Freezing Point: ND

Coefficient of Water/Oil Distribution: ND

10. Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Incompatible Materials: Avoid contact with strong bases, metals.

Conditions to Avoid/Conditions of Reactivity: Avoid contact with strong bases, metals.

Hazardous Decomposition or Byproducts: May release toxic and corrosive fumes when heated to decomposition.

11. Toxicological Information

11.1 Acute (Primary Routes of Exposure)

Eyes: (Irritancy): Irritant: Causes burns.

Skin: (Irritancy or Sensitization): Irritant: Causes irritation.

Ingestion: Harmful if swallowed.

Inhalation: Vapors and mists may irritate upper respiratory tract.

11.2 Long Term Exposure

None known.

Carcinogenicity: IARC, NTP and OSHA do not list this product or its ingredients as carcinogens.

Reproductive Toxicity/Teratogenicity/Mutagenicity/Toxicologically Synergistic Products: ND

12. Ecological Information

None available

13. Disposal Considerations

Dispose of absorbent or flush neutralized material to sewer with copious amounts of water, if in accordance with state, local and federal regulations. For additional guidance, contact the State Water Board or the Regional Office of the EPA.

14. Transport Information

None available.

15. Regulatory Information

None available.

16. Other Information

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NA - Not Applicable

ND - Not Determined

NE - Not Established



PRODUCT SAFETY DATA SHEET

1. Identification of the Substance and Company

Indicator B

Product No. EQ0821

MSDS No. Q103

Prepared by: M. Ebers

asksteris_msds@steris.com

Date Created: April 1, 2002

Date Revised: March 14, 2008

Date Reviewed: March, 2008

NFPA 704 HAZARD RATING:

HEALTH: 1

FIRE: 3

REACTIVITY: 0

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Telephone Number for Information: 1-800-444-9009 (Customer Service-Scientific Products)

2. Hazards Identification

Flammable. Causes eye irritation.

3. Composition/Information on Ingredients

Hazardous Component(s)	EEC No.	CAS No.	% By Wt.	Symbol	R Phrases
Isopropyl alcohol	NA	67-63-0	80%	NA	NA

4. First Aid Measures

Eye and Skin Contact: Flush affected area immediately with water for 20 minutes.

Inhalation: NA

Ingestion: If swallowed, call physician.

5. Fire-Fighting Measures

Conditions of Flammability/Flash Point: 64F (18C) **Method:** TCC

Flammable Limits: LEL: 2% UEL: 12%

Special Hazards: None known.

Explosability Data: Dangerous when exposed to heat or flame. Moderate explosion hazard when exposed to heat or flame.

Extinguishing Media: Dry chemical, carbon dioxide, CC14

Special Fire Fighting Procedures: Exercise caution when fighting any chemical fire. Wear self-contained (positive pressure if available) breathing apparatus and special protective clothing.

6. Accidental Release Measures

Small spills may be flushed with large amounts of water to a sanitary sewer.

7. Handling and Storage

7.1 Handling

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

7.2 Storage

Keep away from heat, sparks and open flame. Avoid direct sunlight.

8. Exposure Control/Personal Protection

8.1 Occupational Exposure Limits

Isopropyl alcohol: ACGIH TLV = 200 ppm and OSHA PEL = 400 ppm. ACGIH STEL = 500 ppm

Toxicity: LD50 (oral-rat): 5890 mg/kg

8.2 Personal Protection

Respirator Protection: Not required. **Eye Protection:** Safety glasses.

Protective Gloves: Disposable.

Other Protective Clothing and Equipment: Lab coat.

Engineering Controls/Ventilation: Local and mechanical exhaust recommended.

9. Physical and Chemical Properties

Solubility in Water: Soluble **Specific Gravity:** 0.7854 **pH:** 3.3-3.7

Percent Volatile by Weight: 80

Physical State/Appearance/Odor: Clear deep red liquid/slight medicinal odor.

Odor Threshold, Vapor Pressure, Vapor Density, Evaporation Rate, Boiling Point and Freezing Point: ND

Coefficient of Water/Oil Distribution: ND

10. Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur.

Incompatible Materials: Strong oxidizers.

Conditions to Avoid/Conditions of Reactivity: Keep away from heat, sparks and open flame.

Hazardous Decomposition or Byproducts: None known.

11. Toxicological Information

11.1 Acute (Primary Routes of Exposure)

Eyes (Irritancy): Causes eye irritation.

Skin (Irritancy or Sensitization): Causes skin irritation.

Ingestion: May be harmful if swallowed.

11.2 Long Term Exposure

None known.

Carcinogenicity: IARC, NTP and OSHA do not list this product or its ingredients as carcinogens.

Reproductive Toxicity/Teratogenicity/Mutagenicity/Toxicologically Synergistic Products: ND

12. Ecological Information

None available

13. Disposal Considerations

Product may be flushed to a sanitary sewer with copious amounts of water, if in accordance with state, local and federal regulations. For additional guidance, contact the State Water Board or the Regional Office of the EPA.

14. Transport Information

None available.

15. Regulatory Information

None available.

16. Other Information

The information on this sheet is not a specification and does not guarantee specific properties. The information is intended to provide general knowledge as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product or where instruction or recommendations are not followed.

NA - Not Applicable

ND - Not Determined

NE - Not Established



PRODUCT SAFETY DATA SHEET

1. Identification of the Substance and Company

Acid 5

Product No. EQ0822

MSDS No. Q104

Prepared by: M. Ebers

asksteris_msds@steris.com

Date Created: April 1, 2002

Date Revised: March 14, 2008

Date Reviewed: March 14, 2008

NFPA 704 HAZARD RATING:

HEALTH: ND

FIRE: ND

REACTIVITY: ND

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Emergency Telephone No. 1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)

Telephone Number for Information: 1-800-444-9009 (Customer Service-Scientific Products)

2. Hazards Identification

Irritant. Causes eye burns and skin irritation.

3. Composition/Information on Ingredients

Hazardous Component(s)	EEC No.	CAS No.	% By Wt.	Symbol	R Phrases
* Hydrochloric Acid	NA	7647-01-0	~ 4%	NA	NA

*This chemical is subject to the reporting requirements of SARA Title III Section 313 and 40 CFR 372.

4. First Aid Measures

Eyes: Flush with water for at least 20 minutes. Contact a physician.

Skin: Flush with water. If irritation develops, contact a physician.

Ingestion: Do NOT induce vomiting. Call a physician. Give large quantities of water.

Inhalation: NA

5. Fire-Fighting Measures

Conditions of Flammability/Flash Point: None

Method: NA

Special Hazards: None

Explosibility Data: ND

Extinguishing Media: Product is not flammable. Use media suitable for surrounding fire.

Special Fire Fighting Procedures: Normal precautions for fighting chemical fires should be observed.

6. Accidental Release Measures

Absorb with inert material or neutralize with soda ash.

7. Handling and Storage

7.1 Handling

Avoid contact with eyes, skin and clothing. Do not breathe mists. Wash thoroughly after handling.

7.2 Storage

Store in a cool, dry area. Avoid direct sunlight.

8. Exposure Control/Personal Protection

8.1 Occupational Exposure Limits

Hydrochloric Acid: ACGIH TLV and OSHA PEL = 5 ppm.

8.2 Personal Protection

Respirator Protection: Not normally required. **Eye Protection:** Safety glasses or goggles.

Protective Gloves: Disposable. **Other Protective Clothing and Equipment:** Lab coat.

Engineering Controls/Ventilation: Normal Room Ventilation.

9. Physical and Chemical Properties

Solubility in Water: Complete

Specific Gravity: Unknown

Physical State/Appearance/Odor: Clear colorless liquid/no odor

pH as Distributed: 1.00

Percent Volatile by Weight: >99

Odor Threshold, Vapor Pressure, Vapor Density, Evaporation Rate, Boiling Point and Freezing Point: ND

Coefficient of Water/Oil Distribution: ND

10. Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Incompatible Materials: Avoid contact with strong bases, metals.

Conditions to Avoid/Conditions of Reactivity: Avoid contact with strong bases, metals.

Hazardous Decomposition or Byproducts: May release toxic and corrosive fumes when heated to decomposition.

11. Toxicological Information

11.1 Acute (Primary Routes of Exposure)

Eyes (Irritancy): Irritant. Causes burns.

Skin (Irritancy or Sensitization): Irritant. Causes irritation.

Ingestion: Harmful if swallowed. May cause gastrointestinal irritation.

Inhalation: Vapors and mists may irritate upper respiratory tract.

11.2 Long Term Exposure

None known.

Carcinogenicity: IARC, NTP and OSHA do not list this product or its ingredients as carcinogens.

Reproductive Toxicity/Teratogenicity/Mutagenicity/Toxicologically Synergistic Products: ND

12. Ecological Information

None available

13. Disposal Considerations

Dispose of absorbent or flush neutralized material to sewer with copious amounts of water, if in accordance with state, local and federal regulations. For additional guidance, contact the State Water Board or the Regional Office of the EPA.

14. Transport Information

None available.

15. Regulatory Information

None available.

16. Other Information

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NA – Not Applicable

ND – Not Determined

NE – Not Established



PRODUCT SAFETY DATA SHEET

1. Identification of the Substance and Company

Acid 1

Product No. EQ0824

MSDS No. Q105

Prepared by: M. Ebers

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Date Created: April 1, 2002 Date Revised: March 14, 2008 Date Reviewed: March 14, 2008

STERIS Corporation, P. O. Box 147, St. Louis, MO 63166, US
Emergency Telephone No. 1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)
Telephone Number for Information: 1-800-444-9009 (Customer Service-Scientific Products)

2. Hazards Identification

Irritant. Causes eye burns and skin irritation.

3. Composition/Information on Ingredients

Hazardous Component(s)	EEC No.	CAS No.	% By Wt.	Symbol	R Phrases
Hydrochloric Acid	NA	7647-01-0	< 1%	NA	NA

4. First Aid Measures

Eyes: Flush with water. If irritation develops, contact a physician.

Skin: Flush with water. If irritation develops, contact a physician.

Ingestion: Do NOT induce vomiting. Call a physician. Give large quantities of water.

Inhalation: NA

5. Fire-Fighting Measures

Conditions of flammability/Flash Point: None

Method: NA

Special Hazards: None

Explosibility Data: ND

Extinguishing Media: Product is not flammable. Use media suitable for surrounding fire.

Special Fire Fighting Procedures: Normal precautions for fighting chemical fires should be observed.

6. Accidental Release Measures

Absorb with inert material or neutralize with soda ash.

7. Handling and Storage

7.1 Handling

Avoid contact with eyes, skin and clothing. Do not breathe mists. Wash thoroughly after handling.

7.2 Storage

Store in a cool, dry area. Avoid direct sunlight.

8. Exposure Control/Personal Protection

8.1 Occupational Exposure Limits

Hydrochloric Acid: ACGIH TLV and OSHA PEL = 5 ppm.

8.2 Personal Protection

Respirator Protection: Not normally required. **Eye Protection:** Safety glasses.

Protective Gloves: Disposable. **Other Protective Clothing and Equipment:** Lab coat.

Engineering Controls/Ventilation: Normal Room Ventilation.

9. Physical and Chemical Properties

Solubility in Water: Complete

Specific Gravity: Unknown

Physical State/Appearance/Odor: Clear colorless liquid/no odor

pH as Distributed: 1.00

Percent Volatile by Weight: >99

Odor Threshold, Vapor Pressure, Vapor Density, Evaporation Rate, Boiling Point and Freezing Point: ND
Coefficient of Water/Oil Distribution: ND

10. Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Incompatible Materials: Avoid contact with strong bases, metals.

Conditions to Avoid/Conditions of Reactivity: Avoid contact with strong bases, metals.

Hazardous Decomposition or Byproducts: May release toxic and corrosive fumes when heated to decomposition.

11. Toxicological Information

11.1 Acute (Primary Routes of Exposure)

Eyes (Irritancy): Irritant: Causes burns.

Skin (Irritancy or Sensitization): Irritant: Causes irritation.

Ingestion: Harmful if swallowed.

Inhalation: Vapors and mists may irritate upper respiratory tract.

11.2 Long Term Exposure

None known.

Carcinogenicity: IARC, NTP and OSHA do not list this product or its ingredients as carcinogens.

Reproductive Toxicity/Teratogenicity/Mutagenicity/Toxicologically Synergistic Products: ND

12. Ecological Information

None available

13. Disposal Considerations

Dispose of absorbent or flush neutralized material to sewer with copious amounts of water, if in accordance with state, local and federal regulations. For additional guidance, contact the State Water Board or the Regional Office of the EPA.

14. Transport Information

None available.

15. Regulatory Information

None available.

16. Other Information

The information on this sheet is not a specification and does not guarantee specific properties. The information is intended to provide general knowledge as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product or where instruction or recommendations are not followed.

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ND – Not Determined

NE – Not Established