Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

bioMérieux, Inc.
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Hazelwood, MO 63042
For Information Call 1-800-638-4835
Web Site: http://www.biomerieux-usa.com/index.htm

EMERGENCY CONTACT
1-800-424-9300 (Chemtrec)
Or Contact Your Local
Poison Control Center

Product Number: 70520
Product Name: EHR
Product Description: Clear, pale yellow liquid reagent for *in vitro* diagnostic use and microbiological control.

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER! Flammable liquid and vapor. Corrosive. May cause burns to the eyes and skin. Inhalation of vapors or mists can cause severe respiratory irritation and lung damage. Do not get in eyes, on skin or clothing. Do not breathe vapors. Keep away from heat, sparks, flames, and all other sources of ignition. Keep container tightly closed.

US OSHA Classification (29CFR1910.1200): Corrosive, Irritant, Target Organ Effects, Flammable Liquid
EU Classification (1999/45/EC): Highly Flammable (F+), R11, S7, S16.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CAS#	COMPONENT	PERCENTAGE
7647-01-0	Hydrochloric acid	6.67%
100-10-7	p-Dimethylaminobenzaldehyde	0.9%
64-17-5	Ethyl Alcohol (Ethanol)	81.1%
7732-18-5	Water	11.33%

SECTION 4: FIRST AID MEASURES

Inhalation: Immediately remove the victim to fresh air. If breathing has stopped administer artificial respiration. Get immediate medical attention.

Skin Contact: Immediately remove contaminated clothing. Flush contacted area with large amounts of water for at least 15 minutes. Get immediate medical attention.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes while holding the eyelids open to assure that the entire surface is flushed. Get immediate medical attention.

Ingestion: Immediately call poison control and follow their instructions. DO NOT INDUCE VOMITING. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media: Dry chemical, CO2, water spray, or alcohol foam.

Special Fire Fighting Procedures: Firefighters should wear self-contained breathing apparatus and full protective clothing.

Unusual Fire and Explosion Hazards: Highly flammable and forms explosive mixture with air. Acids will react with most metals releasing hydrogen gas which is flammable and explosive.

Hazardous Combustion Products: Hydrogen chloride, oxides of carbon.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all sources of ignition. Wear protective equipment (gloves, respirator, suit, goggles). Neutralize with sodium bicarbonate. Ventilate area. Collect spill with absorbent, place in container for disposal.

SECTION 7: HANDLING AND STORAGE

Follow the directions on the package insert. Follow prudent laboratory practices of avoiding contact (breathing, touching, smoking…) with laboratory reagent. Avoid breathing vapors. Avoid contact with the skin and eyes.

Follow storage instructions on the product label. Keep away from all sources of ignition. Store in the dark at 2-8°C until the expiry date indicated on the packaging. The product may be kept for up to 1 month after the ampule has been opened and the reagent transferred into the dropper-bottle (or until the expiration date if this is earlier).

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Component	Exposure Limits
Hydrochloric Acid	2 ppm Ceiling ACGIH TLV 5 ppm Ceiling OSHA PEL
p-Dimethylaminobenzaldehyde	None Established
Ethyl Alcohol	1000 ppm STEL ACGIH TLV 1000 ppm TWA OSHA PEL

Ventilation: Use only in well ventilated areas.

Respiratory Protection: If exposures exceed the occupational exposure limits wear an approved organic vapor/acid gas respirator or supplied air respirator. Selection and use of respiratory protection must be in accordance with OSHA or other applicable requirements.

Gloves: Impervious gloves such as butyl rubber.

Eye Protection: Chemical safety goggles.

Other Protective Equipment/Clothing: Appropriate impervious clothing as needed to prevent contact

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear, pale yellow liquid.

pH: <1	**Boiling Point:** 163°F/73°C
Vapor Pressure: 40 mmHg @ 19°C	**Melting Point:** Not available
Vapor Density: 1.59	**Percent Volatile:** 99%
Evaporation Rate Not available	**Specific Gravity:** 0.87
Water Solubility: Miscible	**Coefficient of Oil/Water:** Not determined
Flash Point: <70°F/21°C (Estimated, Ethyl alcohol has a flash point of 55°F/13°C)	**Autoignition Temp:** 682°F/363°C (Ethyl alcohol)
Flammability Limits: **LEL:** 3.3% **UEL:** 19%	

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Avoid light and excessive heat and all sources of ignition.
Incompatibility: Alkalies, oxidizers, metals, amines, metal oxides, carbonates, cyanides, sulfides, sulfuric acid.

Hazardous Decomposition Products: Hydrogen chloride gas, hydrogen, chlorine, oxides of carbon. Hydrochloric acid will react with most metals releasing flammable and explosive hydrogen gas.
Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE HEALTH HAZARDS

Inhalation: Inhalation of vapors or mists may cause irritation to the mucous membranes and respiratory tract, dizziness, and narcosis. Severe exposures may result in pulmonary edema which may be fatal.

Skin Contact: Contact may cause severe irritation and chemical burns.

Eye Contact: Contact may cause severe irritation and chemical burns that may lead to damage and possible blindness.

Ingestion: Ingestion may cause burns to the mouth, throat and gastrointestinal tract, dizziness, nausea, narcosis, collapse, shock and death.

Chronic Health Hazards: Prolonged and/or frequent exposure to acidic solutions may cause dermatitis. Chronic exposure to acid vapors and mists may cause dental erosion. Prolonged overexposure to ethyl alcohol may cause liver damage and adverse reproductive effects.

Carcinogen Status: None of the components of this product is listed as a carcinogen or suspected carcinogen by ACGIH, IARC, NTP or OSHA.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing respiratory and/or skin disease may be at increased risk from exposure to this product.

Acute Toxicity Values:
Hydrochloric acid: Oral rabbit LD50: 900 m/kg; Inhalation rat LC50: 3124 ppm/1 hr. Mutation Data, Reproductive Effects Data.
Ethyl Alcohol: Oral rat LD50: 7060 mg/kg; Inhalation rat LD50: 20,000 ppm/10 hr. Mutation Data, Reproductive Effects Data
p-Dimethylaminobenzaldehyde: Ipr rat LD50: 620 mg/kg.

SECTION 12: ECOLOGICAL INFORMATION

Hydrochloric acid: LC100 Trout 10 mg/L/24 hr; LC50 Shrimp: 100-330 ppm/48 hr.
Ethyl Lactone: LC50 Rainbow Trout: 13000 mg/L/96 hr.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of product in accordance with all local, state/provincial and federal regulations.

Container Disposal: Empty containers should be collected for proper disposal.

SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name: Flammable liquid, corrosive, n.o.s. (Contains ethyl alcohol and hydrochloric acid)
DOT Hazard Class: 3(8), PG II
UN Number: UN2924
DOT Labels Required (49CFR172.101): Flammable liquid, Corrosive
DOT Packing Requirements: 49 CFR 173.202 and 49 CFR 173.243
Exceptions: None

IATA Shipping Name: Flammable liquid, corrosive, n.o.s. (Contains ethyl alcohol and hydrochloric acid)
UN Number: UN2924
IATA Hazard Class: 3 (8), PG II
IATA Hazard Labels Required: Flammable liquid, Corrosive (1-5L-Cargo Aircraft Only)
IATA Packing Requirements: Passenger Aircraft-305; Cargo Aircraft-307

Comment: Up to 30-15 mL bottles of EHRLICHS Reagent in a package can be shipped under IATA as "Dangerous Goods in Excepted Quantities". Kits in packages that do not exceed a gross mass of 64 lbs can be shipped under DOT (173.4a) as excepted small quantities (inner receptacle max 30 mL).

IMDG Shipping Name: Flammable liquid, corrosive, n.o.s. (Contains ethyl alcohol and hydrochloric acid)
IMDG Class: 3(8), PG II
UN Number: UN2924
IMDG Label: Flammable liquid, Corrosive

SECTION 15: REGULATORY INFORMATION

SARA 311/312: Hazard Categories for SARA 311/312 Reporting: Acute Health, Chronic Health, Fire Hazard
SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements under SARA Section 313(40 CFR372):

Hydrochloric acid 6.67%

CERCLA Section 103 Reportable Quantity: Product: 74,500 lbs (Hydrochloric acid: 5000 lbs). Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
California Proposition 65: This product contains the following substances known to the State of California to cause cancer and/or reproductive harm: None known.
Canada WHMIS Classification: Class B-2, Class D-2-B, Class E
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

SECTION 16: OTHER INFORMATION

NFPA Hazard Rating: Health: 3 Fire: 3 Instability: 0

Revision History:

12/13/2012:	Three year update no changes.
12/14/2009:	Updated format – Switched sections 2 and 3, Moved Exposure Limits to Section 8, Transportation information, Reworded CERCLA statement.
03/24/1993:	New MSDS

The above information is believed to be correct as of the date of this sheet but does not purport to be all inclusive and shall be used only as a guide. Since the use of this information and the conditions of use of the product are not within the control of bioMérieux S.A. nor bioMérieux, Inc., it is the user's obligation to assure safe use of this product