

Material Safety Data Sheet

I.E.D. Unit (Ion-Exchange Decal Unit), IED1203, IED1204
June 17, 2011

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1. Product and Company Identification

Product(s)	I.E.D. Unit (Ion-Exchange Decal Unit), (IED1203, IED1204)
Related Product Kit	N/A
Intended Use & Restrictions	Immunohistochemistry reagent intended for use by professional laboratory personnel that have been properly trained in its use.
Company Information	Biocare Medical, LLC 4040 Pike Lane Concord, CA 94520 United States Tel: +1 800-799-9499 (7AM-5PM, PST, Mon-Fri) Fax: +1 925-603-8080 Web: www.biocare.net
24-Hour Emergency Contact	CHEMTREC +1 800-424-9300 (USA and Canada only) +1 703-527-3887 (all other countries)

2. Hazards Identification

Emergency Overview	Corrosive solution will cause acid burns to skin and damage to eyes. Avoid directly inhaling fumes.
OSHA Hazards	Corrosive, Harmful by ingestion, Target Organ Effect Target organs: Kidney, liver, central nervous system, blood
GHS Classification	Danger
Signal words, Symbol, Hazard & Precautionary Statements	Skin Irritation (Category 2), Serious eye damage (Category 1)



Hazard Statements

H302 Harmful if swallowed
H315 Causes skin irritation
H318 Causes serious eye damage
H331 Toxic if inhaled

Precautionary Statements

P280 Wear protective gloves/eye protection/face protection.
P305+P351+P338 IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Potential Health Effects

Skin Contact	Harmful if absorbed through skin. Causes skin burns.
Eye Contact	Causes eye burns.
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

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Ingestion May be harmful if swallowed. May cause irritation of gastrointestinal tract, nausea, or vomiting.

See Section 11: Toxicological Information for additional information.

Environmental Effects None identified.

See Section 12: Ecological Information for additional information.

3. Composition / Information on Ingredients

Chemical Name	Synonyms	% Composition	CAS Number
Hydrochloric acid	Muriatic acid	5-20%	7647-01-0
Formic acid	N/A	5-20%	64-18-6
Proprietary ion-exchange resin	N/A	<5%	N/A
Water	N/A	60-90%	7732-18-5

Note: It has been determined that the remaining ingredients of this product are not classified as hazardous according to the Federal OSHA Hazardous Communication Standard (29 CFR 1910.1200) or the Globally Harmonized System of Classification and Labeling of Chemicals.

4. First Aid Measures

General Advice Avoid further exposure to product. Consult a physician.

In case of skin contact Wash exposed area with soap and plenty of water. Remove any contaminated clothing. Seek medical attention.

In case of eye contact Wash eyes with plenty of water for at least 15 minutes. Have victim remove contact lenses. Be sure to wash under eyelids. Seek medical attention.

If inhaled Remove victim to well-ventilated area. If victim is not breathing, give artificial respiration. Seek medical attention.

If swallowed If victim is conscious, rinse mouth with water. Do not give anything to an unconscious victim. Seek medical attention.

5. Fire Fighting Measures

Suitable Extinguishing Media Water spray, alcohol-resistant foam, or carbon dioxide. Use extinguisher media appropriate for surrounding fire.

Special Protective Equipment for Firefighters Wear self-contained breathing apparatus and protective clothing to prevent contact with eyes and skin.

Special Exposure Hazards Hydrogen chloride gas is a potential decomposition product under fire conditions. Avoid inhalation of fumes, which may be toxic or irritating.

6. Accidental Release Measures

Personal Precautions Use of personal protective equipment is recommended as described in Section 8. Isolate hazard area and deny entry to unprotected personnel.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways.

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Methods for containment and clean up Small spills may be contained and cleaned-up with paper towels or absorbent pads. Absorb large spills with sand or vermiculite and place in a closed container for waste disposal. Avoid physical contact during removal.

7. Handling and Storage

Precautions for Safe Handling Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors. Do not ingest. Wash hands thoroughly after use.

Conditions for Safe Storage Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure Controls / Personal Protection

Permissible Exposure Limits Hydrochloric acid, ACGIH, Ceiling, 2 ppm.
Hydrochloric acid, OSHA, Ceiling, 5 ppm, 7 mg/m³.
Formic acid, ACGIH, TWA, 5 ppm, 9.4 mg/m³.
Formic acid, ACGIH, STEL, 10 ppm, 19 mg/m³.
Formic acid, OSHA, TWA, 5 ppm, 9 mg/m³.

Engineering Controls Use of a chemical fume hood is recommended.

Personal Protective Equipment

Eye Protection Wear chemical splash goggles and face shield when eye and face contact is possible due to splashing or spraying of material.

Skin Protection Use chemically resistant gloves and a lab coat with sleeves.

Respiratory Protection Exceeding exposure limits is unlikely during normal usage. However, if irritating vapors are produced, respiratory protection is recommended. Attempt to reduce exposure levels to an acceptable range.

General Hygiene Measures Avoid contact with eyes, skin and clothing. Wash hands thoroughly after handling and before eating or drinking.

9. Physical and Chemical Properties

Appearance Clear, colorless solution with golden colored beads.

Odor Not determined

pH (as supplied) < 1

Melting point Not determined

Boiling point Not determined

Flash point Not determined

Flammability Not determined

Lower explosion limit Not determined

Upper explosion limit Not determined

Vapor pressure Not determined

Vapor density Not determined

Specific gravity Not determined

Solubility (in water) Soluble

Partition coefficient (n-octanol/water) Not determined

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Auto-ignition temperature Not determined

Decomposition Temperature Not determined

10. Stability and Reactivity

Chemical Stability Stable under recommended storage conditions (see Section 7).

Conditions to avoid Keep away from incompatible materials.

Materials to avoid Bases, amines, metals, oxidizing agents.

Hazardous decomposition products Hazardous decomposition products formed under fire conditions: carbon monoxide, carbon dioxide, hydrogen chloride gas.

Possibility of hazardous reactions None identified.

11. Toxicological Information

Acute dose effects Hydrochloric acid: LD50 (oral, rabbit) 900 mg/kg
Formic acid: LD50 (oral, rat) 1100 mg/kg
Formic acid: LC50 (inhalation, rat, 4h) 7.4 mg/L
Formic acid: LC50 (inhalation, rat, 0.25h) 15,000 mg/L

Repeat dose effects Not determined

Skin irritation Not determined

Skin and respiratory sensitization Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Eye irritation Not determined

Carcinogenicity No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, potential, known, anticipated, or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.

Mutagenicity Not determined

Reproductive effects Not determined

Developmental effects Not determined

Target organ effects Not determined

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated at product concentrations.

12. Ecological Information

Ecotoxicity Hydrochloric acid: LC50 (*Gambusia affinis* [Mosquito fish], 96 h) 282 mg/L
Formic acid: LC50 (*Leuciscus idus* [Golden orfe], 96 h) 46-100 mg/L

Persistence and degradability No data available

Bioaccumulation/accumulation No data available

Mobility in environmental media No data available

Other hazardous effects No data available

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13. Disposal Considerations

Product Disposal should be in accordance with applicable national, state, and local laws and regulations. Local regulations may be more stringent than national or state requirements. Verify local and state regulations before discharging into public sewers or landfills. Do not dump into any body of water. Contact a licensed professional waste disposal service for appropriate methods of disposal.

Contaminated packaging Dispose of as unused product.

14. Transportation Information

Proper shipping name Not applicable

Technical name Not applicable

Hazard class Not applicable

Identification number Not applicable

Packing group Not applicable

DOT (US) Not regulated

IMDG Not regulated

IATA Not regulated

TDG Not regulated

15. Regulatory Information

Inventory Status

United States (TSCA) All components are listed or not subject to reporting requirements.

Canada (DSL / NDSL) All components are listed or not subject to reporting requirements.

SARA 302 Components No chemicals in this product are subject to reporting requirements.

SARA 313 Components The following components are subject to the reporting requirements of SARA Title III, Section 313:
Hydrochloric acid, 7647-01-0, 5-20%
Formic acid, 64-18-6, 5-20%

SARA 311/312 Hazards Acute health hazard, chronic health hazard.

California Prop. 65 components This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other Information

Sources and Suitability The above information was obtained from sources available at the time of revision and believed to be accurate and reliable. The information included is not intended to be all inclusive and should only be used as a guide. Biocare shall not be held liable for any damage resulting from use, handling, or contact with the above product.

Revision Date June 17, 2011
(All MSDS's before this date should be discarded.)

Replaces Revision This MSDS has been updated to reflect current hazard information and product formulations.

Note: Before using this product, please visit the Biocare Medical website at biocare.net/support/msds/ for the current version of this MSDS.