Section I – Product Identification

Product Name: Micro-Fuel Cell, Class A-5
Manufacturer: Teledyne Analytical Instruments
Address: 16830 Chestnut St.
City of Industry, CA 91748
Phone: (626) 961-9221
Technical Support: (626) 934-1673
Environment, Health and Safety: (626) 934-1592
Date Prepared or Last Revised: 02/08/06
Emergency Phone Number: (626) 961-9221

Section II – Physical and Chemical Data

Composition:

Chemical and Common Names: Acetic Acid ($HC_2H_3O_2$) 50% v/v
Lead (Pb), pure, granular

CAS Number: $HC_2H_3O_2$ 64-19-7
Pb 7439-92-1

Characteristics of Individual Components

	$HC_2H_3O_2$ (Pure)	**Pb (Pure)**
Melting Point	16.6 °C	328 °C
Boiling Point	118 °C	1755 °C
Specific Gravity	1.02 @ 20 °C	11.34
pH	1 to 2	N/A
Solubility in Water	Completely soluble	Insoluble
Appearance and Odor	Clear, colorless solution with strong vinegar-like odor	Grey, metal Odorless
Vapor Density Air=1	2.1	N/A
Vapor Pressure mm H	11 @ 20 °C	N/A
Evaporation Rate	0.97	N/A

Section III – Physical Hazards

Potential for fire and explosion: The electrolyte in the Class A-5 cell is not flammable. There are no fire or explosion hazards associated with Class A-5 cells.

Potential for reactivity: The cells are stable under normal conditions of use. Avoid contact between the cell's electrolyte and strong acids, strong bases, oxidizers and reducing agents.

Section IV – Health Hazard Data

Primary route of entry: Ingestion, eye/skin contact.

Exposure Limits:

OSHA PEL: 10 ppm TWA ($HC_2H_3O_2$) 0.05 mg/m^3 (Pb)

ACGIH TLV: 10 ppm TWA ; 15 ppm (STEL) ($HC_2H_3O_2$)

EFFECTS OF OVEREXPOSURE

Ingestion: The electrolyte could be harmful or fatal if swallowed. Oral LD50 (Rat) = 6620 mg/kg

Eyes: The electrolyte is corrosive; eye contact could result in permanent loss of vision.

Dermal: The electrolyte is corrosive; skin contact could result in a chemical burn.

Inhalation: Liquid inhalation is unlikely.

Signs/symptoms of exposure: Contact with skin or eyes will cause a burning sensation.

Medical conditions aggravated by exposure: None

Carcinogenicity: NTP Annual Report on Carcinogen: Not listed
LARC Monographs: Not Listed
OSHA: Not Listed

Other health hazards: Lead is listed as a chemical known to the State of California to cause birth defects or reproductive harm.

As the cell is used, lead acetate is formed in the electrolyte. Lead acetate is listed as a chemical known to the State of California to cause cancer.

Section V – Emergency and First Aid Procedures

Eye contact: Flush eyes with water for at least 15 minutes and get immediate medical attention.

Skin contact: Wash affected area with plenty of water and remove contaminated clothing. If burning persists, seek medical attention.

Ingestion: Give plenty of cold water. Do not induce vomiting. Seek medical attention. Do not administer liquids to an unconscious person.

Inhalation: Liquid inhalation is unlikely.

Section VI – Handling Information

NOTE: The oxygen cells are sealed and under normal circumstances the content of the cells do not present a health hazard. The following information is given as a guide in the event that a cell leaks.

Protective clothing: Rubber gloves, chemical splash goggles.

Clean-up procedures: Wipe down the area several times with a wet paper towel. Use a fresh towel each time.

Protective measures during cell replacement: Before opening the bag containing the cell, check the cell for leakage. If the cell has leaked do not open the bag. If there is liquid around the cell while in the instrument, put on gloves and eye protection before removing the cell.

Disposal: Should be in accordance with all applicable state, local and federal regulations

NOTE: The above information is derived from the MSDS's provided by the suppliers. The information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Teledyne Analytical Instruments shall not be held liable for any damages resulting from handling or from contact with the above product.