Title: Death From Dimethylmercury Poisoning

Identifier: 1997-DOE-DP-9

Date: 1997-08-20

Lesson Learned Statement:

Latex rubber gloves do not provide sufficient protection against exposure to some toxic compounds such as dimethylmercury.

Discussion:

During research activities, a Dartmouth College scientist was exposed to as little as a drop of dimethylmercury in August 1996. The scientist did not show symptoms (loss of balance, trouble speaking) until January 1997, when she was diagnosed with mercury poisoning, went into a coma 3 weeks later, and died in June of 1997. Hospital tests showed 80 times the lethal dose of mercury in her blood. The compound is attracted to the oil in human skin and is readily absorbed by the body.

Analysis:

Glove tests by an independent laboratory showed that the rare compound can pass through rubber latex gloves quickly, and usually without damaging the gloves. This finding shocked other scientists in the field as it was believed that the rubber latex gloves provided the required protection.

Recommended Actions:

The following recommended actions were published in a newsletter of the American Chemical Society (May 1997): when working with dimethylmercury, wear neoprene gloves with long cuffs and have blood and urine tested frequently.

Originator:

US Department of Energy, Defense Programs.

Information from an article in The Washington Times August 19, 1997

Validator:

N/A

Contact:

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Name Of Authorized Derivative Classifier: 
N/A 

Name Of Reviewing Official: 
N/A 

Priority Descriptor: 
Red / Urgent 

Keywords: 
dimethylmercury; death; chemical; latex; rubber gloves 

References: 
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DOE Function / Work Categories: 
Laboratory Experimentation 
Occupational Safety & Health - Personnel Protective Equipment 

ISM Category: 
Analyze Hazards 
Develop / Implement Controls 

Hazard: 
Personal Injury / Exposure - Hazardous Material (General) 

End of Lesson!