



## OSMIUM TETROXIDE

### I. Protocol Overview

Osmium tetroxide is used as a tissue fixative for electron microscopy, as catalyst sources for certain reactions, and in the treatment of rheumatism. It is a colorless to pale yellow crystalline solid with a pungent, chlorine-like odor and acts as a corrosive chemical, producing rapid injury. Onset of signs and symptoms is usually rapid, including dermal (black marks on skin, dark wound base/grey-brown deposits in wounds, painful dermatitis, tissue necrosis), ocular ("halos", "scratchy" or painful sensation in the eyes in vision), respiratory (burning sensation in lungs, dyspnea, inflammation/necrosis of the trachea, bronchi, and lung, edema, coughing), as well as lacrimation, headache, and abdominal cramps.

For all suspected chemical exposures, consult the Poison Control Center (800-222-1222) located at Children's Hospital of Philadelphia. Information and treatment advice is available to the public and healthcare professionals at no charge.

Inductively Coupled Plasma Mass spectrometry methods (ICP/MS) are used to detect urinary metals present in the sample. Samples are acidified and metals are quantified via elemental separation followed by mass spectrometry analysis. ICP/MS, ICP spectroscopy, and flame atomic adsorption spectroscopy (GFAA) methods are used to detect metals in environmental and food samples.

The Delaware Public Health Laboratory does not perform this testing. Contact the CDC or the Poison Control Center.

### II. Contact Information

24/7 CDC Emergency Contact Number: 1-888-295-5156

Poison Control Center: 215-386-2100

### III. CDC Website

<http://www.cdc.gov/niosh/topics/osmium-tetroxide/>

**24/7 Emergency Contact Number: 302-223-1520**

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