

Principal Investigator: _____

Date Approved: _____

Chromic Acid and Dichromate Salts

Chromic acid (H_2CrO_4) and its derivative, **dichromate salts** ($\text{M}_2\text{Cr}_2\text{O}_7$, where M is a metal cation) are strong oxidants that are corrosive to human tissue and metal, as well as acutely toxic, carcinogenic, mutagenic, and teratogenic. Chromic acid is the term generally used for a solution of chromium trioxide and sulfuric acid. It is often used as a reagent for cleaning glassware or oxidizing alcohols. Due to the toxic Cr_6^+ ion, all of these substances are poisonous and potentially fatal when ingested, inhaled, or absorbed through the skin. They also cause severe skin, eye, and mucous membrane damage.



Personal Protective Equipment & Personnel Monitoring

Lab Coat	Gloves	Eye Protection
		
Traditional lab coat. A chemical-resistant lab apron may be appropriate when handling large quantities.	Nitrile gloves. Do not wear latex gloves.	ANSI Z87.1-compliant safety goggles, or face shield if a splash hazard is present.

Labeling & Storage

Store containers upright & tightly closed in a dry and well-ventilated place. Containers holding chromic acid and dichromates need to be stored below eye level. Each container's label should include a skull-and-crossbones pictogram, the word "Danger", and identify the material as both acutely toxic and carcinogenic. Containers of chromic acid and dichromate salts must be stored in leak-proof secondary containment within a Designated Area. The secondary container's label should include a skull-and-crossbones pictogram, the word "Danger", and identify the material as both acutely toxic and carcinogenic. Incompatibles: acids, bases, powdered metals, hydrazine, phosphorous, and all organic chemicals.

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Engineering Controls, Equipment, & Materials

Fume Hood

Use a fume hood when working with materials which are toxic by inhalation. If your protocol does not permit the handling of such materials in a fume hood, contact EH&S to determine whether additional respiratory protection is warranted.

Housekeeping

Spills

Treat all spills of these materials as a major spill. Notify others in the area of the spill, including your supervisor. Evacuate the location. Call 911 and alert TWU DPS (940-898-2911 in Denton; 214-689-6666 in Dallas; 832-870-6128 in Houston). Report any exposure to EH&S at 940-898-4001. Remain on-site (at a safe distance) to provide detailed information to first responders.

Decontamination

Wearing proper PPE, decontaminate equipment and bench tops using soap and water. Dispose of the used chemical and contaminated disposables as hazardous waste following TWU EH&S guidelines.

Waste

Refer to the TWU Chemical Hygiene Plan for details.

First Aid & Emergencies

Skin Contact

Immediately remove contaminated clothing and accessories; flush the skin with water for at least 15 minutes. Seek medical attention immediately.

Eye Contact

Check for and remove contact lenses. Immediately flush eyes with water for at least 15 minutes. Seek medical attention immediately.

Inhalation

Move affected individual(s) into fresh air. Seek medical attention immediately.

Ingestion

Do not induce vomiting or give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical attention.



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