UNIVERSITY OF NORTH CAROLINA CHARLOTTE | ENVIRONMENTAL HEALTH & SAFETY

Standard Operating Procedure

Chromic Acid and Dichromate Salts

Principal Investigator: _____ ***Date Approved:*** _____

This document covers basic chemical safety information for chromic acid and dichromate salts. The use of chromic acid and dichromate salts is subject to pre-approval by the Principal Investigator (PI) and/or Supervisor. PI and/or Supervisor may use the sheet attached to this SOP to document any lab specific training for Chromic Acid and Dichromate Salts. DO NOT USE CHROMIC ACID OR ANY DICHROMATE SALT UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.

Chromic Acid and Dichromate Salts

Chromic acid (H2CrO4) and its derivative, dichromate salts (M2Cr2O7, 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 Cr6+ 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 white 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. Primary containers should be labeled according to the UNC Charlotte Chemical Hygiene Plan. The secondary container's label must contain the chemical name and corresponding hazards. Containers of chromic acid and dichromate salts must be stored in leak-proof secondary containment within a Designated Area. Incompatibles: acids, bases, powdered metals, hydrazine, phosphorous, and all organic chemicals.

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 handing of such materials in a fume hood, contact EHS to determine whether additional respiratory protection is warranted.

Housekeeping

Spills

Notify others in the area of the spill, including your supervisor. Evacuate the location where the spill occurred. Call 911 from any campus phone (or 704-687-2200 from a cell phone). Report any exposure to EHS at 704-687-1111. 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 the UNC Charlotte EHS guidelines.

Waste

Refer to the UNC Charlotte Chemical Hygiene Plan for details.

First Aid & Emergencies

Skin Contact

Immediately remove contaminated clothing and shoes; flush skin with water for at least 15 minutes. Get medical attention immediately.

Eye Contact

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

Inhalation

Move person into fresh air. Get medical attention immediately.

Ingestion

Do not induce vomiting or give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Name	Signature	Date