

# Safetygram

NCI-Frederick

ISM-137

Laboratory Personnel

March 2013

## Chromic Acid Cleaning Mixtures

EHS strongly urges *against* using potassium dichromate/sulfuric acid mixtures to clean glassware. These mixtures are very effective cleaners, but because of their strongly corrosive and oxidizing characteristics they can cause serious injuries. Skin contact with chromic acid can cause ulcerations, which heal slowly, and hexavalent chromium is a known human carcinogen. Chromic acid reacts with organic substances and can generate enough heat to cause a laboratory fire. Tests have shown that chromate residues are retained on glassware even after repeated rinsing and residual contamination may interfere with analytical procedures. Also, all chromium solutions are hazardous wastes- so you must collect all rinses and unused cleaner for disposal by EHS.

There are a number of commercial, non-oxidizing, alkaline cleaning solutions (Micro, Fisher FL-70, Kern DeContam) that are being used at this facility. EHS maintains a file of product literature on these glassware cleaners. A number of our laboratories have had success using these replacement cleaners. If these cleaners are not effective enough, a strongly oxidizing solution of ammonium peroxydisulfate in concentrated sulfuric acid (NOCHROMIX), will provide all the efficacy of a chromic acid cleaning mixture without the heavy metal hazard of chromium.

All NCI-Frederick laboratories currently using chromic acid mixtures are urged to switch to one of the options listed above. No chromic acid mixture; spent or otherwise, may be discarded in sinks. EHS will pick up for disposal all such mixtures upon request.

For further information please call Waste Management at x5718.