

B. Perchloric Acid Fume Hood

1. There is one hood designed for perchloric acid use. It is located in ST #386. This hood has a device installed to flush the ductwork with water so that we can wash away potentially explosive crystals.
2. Any procedure using perchloric acid, of any concentration, at elevated temperatures, must be performed in this designated hood.
3. Concentrated bottles, usually purchased at 70% by weight (11.65 M), must be stored in the cabinet under the perchloric fume hood.
4. Dilutions of the concentrated perchloric acid must be made inside of the special hood.
5. Do not purchase anhydrous perchloric acid, >85%, without prior approval, as it is very unstable and can easily explode upon contact with organic materials. Use of this dangerous chemical would require experimental procedures to be approved, and additional safety preparations completed in advance.
6. Do not heat perchloric acid in an oil bath or with an open flame.
7. Perchloric acid should be stored in secondary containment made of glass, PVC, polyethylene or polypropylene.
8. Do not absorb spills of perchloric acid in paper towels or rags, as once they are dry they may spontaneously ignite. If you have a spill on these types of materials place it into a plastic bag, wet them with water, seal the plastic bag, and notify the chemical safety officer.
9. Dilutions and working stocks that are 50% by weight (7.8 M), or less, may be used and stored in regular fume hoods, as long as it will not be heated.
10. If stock bottles of perchloric acid have turned dark or have crystals around the bottom, do not move the bottle. Contact the Chemical Safety Officer or E.H.&S. immediately.