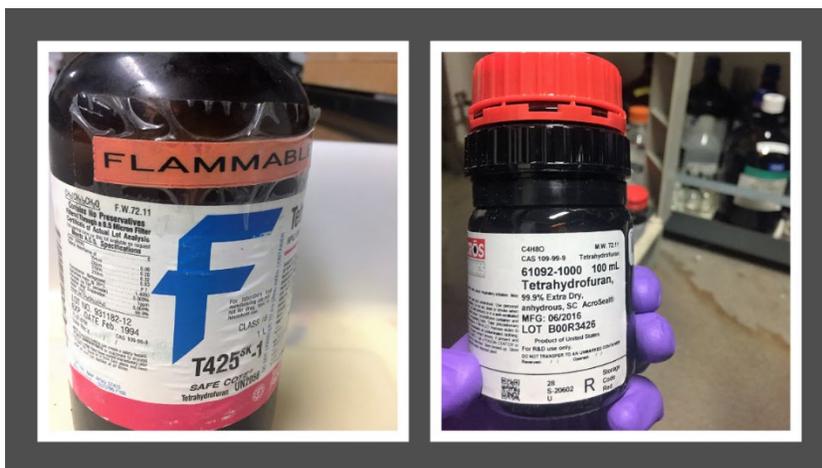




Peroxide Forming Chemical Overview

Peroxide-forming chemicals are a class of compounds that have the ability to form shock-sensitive explosive peroxide crystals. Diethyl ether and tetrahydrofuran are two most common peroxide-forming chemicals used in CSUSM labs. It is extremely important proper procedures are followed regarding the identification, handling, storage time limits, and disposal of these chemicals.

CSUSM's online chemical inventory system, [Chimera](#), gives Faculty, Lab Managers, and ISTs access to manage chemicals within their control areas. Chimera has the ability to assist users with chemical inventory, SDS's, and management of peroxide forming chemicals.



The risk associated with peroxide formation increases if:

- The peroxide crystallizes or becomes concentrated by evaporation or distillation.
- Distilled to dryness.
- Exposure to air, light and heat, moisture, and contamination from metals.
- Inhibitors become exhausted.

Manufacturers may add an inhibitor to peroxide forming chemicals to counter peroxide formation (butylated hydroxy toluene). Peroxide forming chemicals tend to explode violently and are capable of causing serious injury or death to researchers in the laboratory if not managed properly. Peroxide forming chemicals should be kept to a minimum by maintaining proper inventory consistent with the rate of use.

Ideal Storage Conditions & Labeling:

Keep away from sources of ignition and store in a cool, dry place. Store in tightly closed containers and keep in a marked flammable storage area. Protect from moisture, light and air. **Containers should be dated when received, after each time opened, and when tested.** Testing with [peroxide test strips](#) should be done monthly for the presence of peroxides. It is not recommended to exceed manufacturers storage time limits. Contact [SH&S](#) for proper disposal if PPM exceeds recommended control point or storage time has expired.

Appropriate Minimum PPE:

- Flame Resistant lab coat
- Closed-toed shoes and long pants
- Eye protection and nitrile gloves