CHEM FACTS:

REFRIGERATING FLAMMABLE MATERIALS

Flammable chemicals **cannot** be stored in conventional refrigerators. Electrical sparks from a conventional refrigerator can ignite the flammable vapors that build up inside. Cold rooms are typically not ventilated and are without a fire suppression systems and should not be used to store flammable liquids. Two kinds of refrigerators are approved for storage of flammables:

1. **Flammable Materials (Flammable-safe) Refrigerator**: These have no spark sources within the refrigerator cabinet. There are, however, spark sources outside the refrigerator cabinet from switches, motors, relays, etc. These spark sources can ignite flammable vapors present outside of the refrigerator. A bottle of flammable liquid dropped and broken near one of these refrigerators can easily be ignited by sparks.
2. **Explosion-proof Refrigerators:** These refrigerators have all spark sources completely sealed inside and are safe for flammable atmosphere both within and outside of the refrigerator cabinet.

The determination for the need for a Flammable-safe refrigerator versus an Explosion-proof refrigerator is based on the area where the refrigerator is located. Solvent storage areas or other areas with a high potential for spills require the use of an Explosion-proof refrigerator. Most labs do not qualify. However, it is very important that all lab personnel are trained to recognize refrigerators and other electrical equipment as possible sources of ignition and are prepared to de-energize them in the event of a spill.

Conventional refrigerators in laboratories and cold rooms that are not safe for flammable storage must be labeled **"NO STORAGE OF FLAMMABLES"** in addition to "no food"