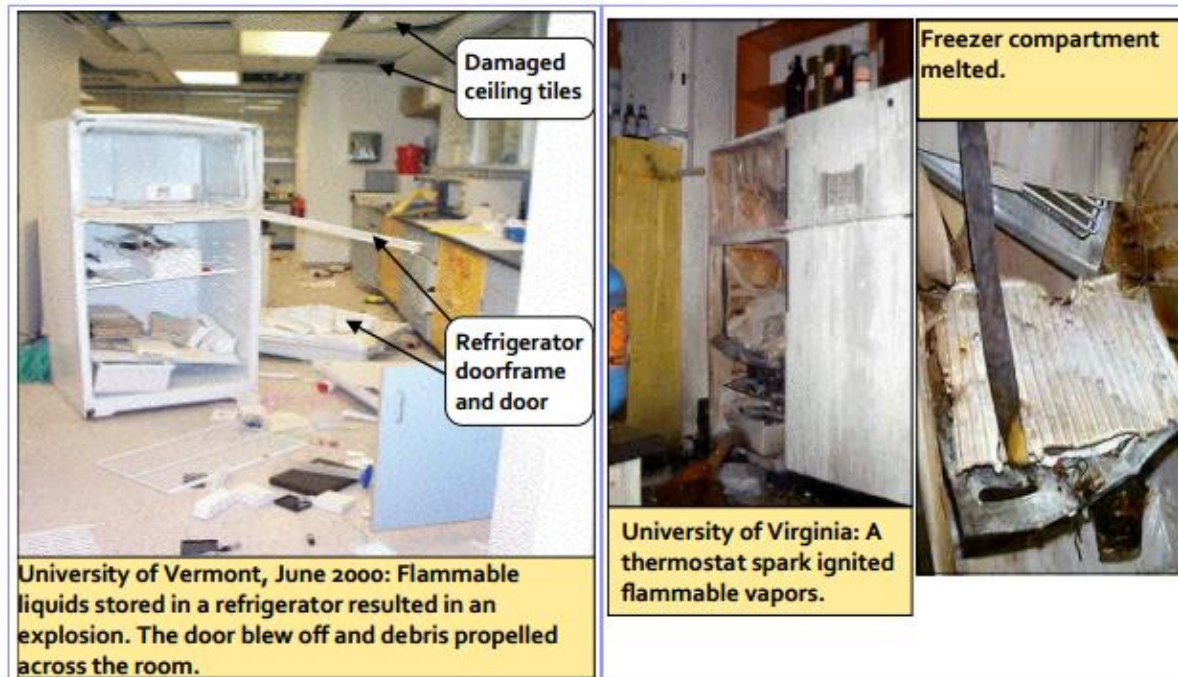


Lessons Learned from a Near Miss

Recently, a lab fridge broke down, causing water to pool onto the floor as it defrosted. This is of course something that can happen to any appliance at any time, but this incident allowed us to discover additional safety concerns and areas for improvement both in this lab, and campus wide. It was later discovered that flammable chemicals were being stored in this fridge.

Vapours from flammable chemicals that are stored in fridges can accumulate over time and can come into contact with an electrical spark, thus creating a powerful explosion. Below are pictures of incidents like this from other Universities. The spark can occur during the normal operation of a fridge such as when the thermostat, the internal lighting unit, defrost timer, or the motor turns on and off. This is why flammable chemicals cannot be stored in fridges that are not specifically designed and rated for flammable storage. Retrofitted or altered general-purpose fridges are not acceptable under the National Fire Code of Canada to store flammable materials.



As we enter into the summer months, this is also a good opportunity to take some time to evaluate your chemical inventory. The flammable chemicals stored in this fridge were no longer in use and were simply in storage for a number of months. Take a look at the hazardous chemicals you have, and determine whether they are actually needed, or whether they are simply taking up space, and potentially adding to the hazards in your lab.

Recommendations:

- Ensure that there are no flammable chemicals stored in fridges, unless they are specifically designed and **rated by the manufacturer** to store flammable materials:
- A properly designed/manufactured fridge for storing flammable materials will be labelled as such. Example labels can be found below:

