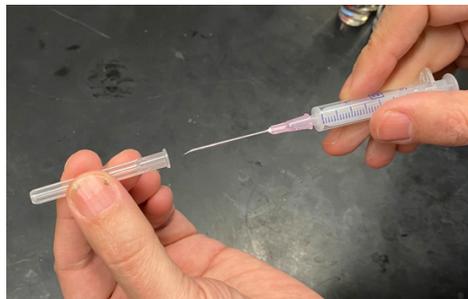


SAFETY NEWSLETTER

Department of Chemistry, Queen's University
Winter 2020

1. Safety Bloopers. Can you identify the safety problems in these four photos? (*The first photo was staged. The other three were real violations seen in Chernoff. Answers on next page.*)



2. Covid-19

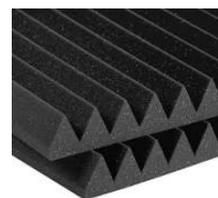
- Normally, gloves may not be worn outside of the lab and or when you touch a doorknob. While Covid-19 is a concern, that rule is temporarily suspended. You may wear disposable gloves outside the lab and when touching doorknobs, but **ONLY** if the gloves have not been used in the lab.



- Paper towels will be available in the washrooms this week. After you wash your hands (for at least 20 s), feel free to take a paper towel and use it to protect your hand when you touch the doorknob. Please don't take the paper towels away for other purposes.

3. Sound insulation

Foam sound insulation is typically quite combustible. In the photo, see what happens when a piece of such insulation is touched briefly by a flame. If sound insulation is on a wall, then the fire would quickly spread upwards. For sound insulation in a lab (e.g. wall or pump cabinet), buy fire-resistant or noncombustible sound insulation such as that sold by Megasorber, Quietstone, or AcoustiGuard. If soundproofing in your lab looks like the photo, replace it.



4. Gas cylinder straps. Gas cylinders must be adequately secured. Clamps, like those shown in the photos below, may look secure but may not *actually* be secure. In recent inspections the

department, cylinders were gently pulled away from the bench to see if they were secure. About a third of the cylinders were found to be effectively unsecured. Why?

- the buckle is not closed properly,
- the strap is frayed,
- the overhang of the benchtop is too little to clamp on to, or
- the clamp isn't tightly secured to the bench. (Retighten it every few months.)

If you would like more permanent brackets affixed to the wall, contact recept@chem.queensu.ca.



buckle not closed properly

clamp not tightly secured to bench
and overhang is too small

frayed strap

5. Respirators

Air-purifying respirators may only be used if:

- no other hazard control methods are practical in the situation
- your face is free of beards, long sideburns, or stubble
- your respirator and your face have been fit-tested by a professional

If the fit isn't perfect, then the mask will make you feel protected but you won't actually be protected. For more information, and to request a fit test, see the website of the Dept of Environmental Health and Safety.



6. Accidental injection of solvents

A recent article in *ACS Cent. Sci.* (2020, 6, 83, includes grim photos) highlighted the risk of flesh necrosis after accidental injection of even TINY amounts of solvent with a syringe. In that incident, the syringe had already been emptied but some solvent was still inside the needle. The solvent was CH_2Cl_2 but the same result happens with other solvents as well, including alkanes. Because the injury appears trivial at first, injured workers tend not to seek medical attention promptly. That's a big mistake, and could cost you your finger, hand, or limb. Get medical help immediately after an accidental injection, even if the syringe was "empty", and especially if some redness or discolouration appears around the point of injury.

7. Answers to the blooper photos. a) Don't hold a cap when you're putting it back onto a needle. Lay the cap on the benchtop and insert the needle into it. b) Don't store bottles of liquid on their sides or upside down. The liquid could leak out of the cap. c) Never put anything on the green floor area in front of an eyewash station or emergency shower. d) When a waste bottle gets close to full, replace it with an empty bottle.

Questions or Concerns about Safety? Please bring them to the attention of your supervisor. For further information, contact the Safety Committee Chair (Philip Jessop, jessop@queensu.ca) or our Safety Officer (Heather Drouillard, Heather.Drouillard@chem.queensu.ca). Suggestions for the newsletter are always welcome.