



# Safety Q and A: You have questions? We have answers!

## The STAO Safety Committee

The STAO Safety Committee welcomes enquiries, with respect to safety issues, from STAO members. Please send your questions to the Safety Committee Chair ([ralph\\_chou@stao.org](mailto:ralph_chou@stao.org)). Your questions and the STAO Safety Committee responses may be published in *Crucible*, particularly if the information is deemed of general interest to other STAO members. Anonymity will be guaranteed.

**QUESTION # 43:** *Some teachers in my department want to store chemicals in kits in their rooms with no labels or concentrations etc. No one will support or believe me that this is not appropriate. As a Department Head, responsible for providing leadership in health and safety, I need clarification and direction. What advice can STAO Safety Committee provide?*

**RESPONSE:** The STAO Safety Committee has considered your question, and offers the following advice. It is our opinion that these kits, if properly planned and used, will enhance the role of experimentation in science education and should be encouraged. However, we are concerned about the safety aspects of their use.

At the very least, these kits should have small spill-proof or break-resistant bottles, and every bottle should be clearly labeled with the name of the chemical solution, its concentration, a WHMIS hazard symbol (if appropriate), and the date on which it was made or filled. It is inappropriate not to do so, and is a violation of the WHMIS regulations under the *Ontario Occupational Health and Safety Act*. See page 2 of *Stay Safe!* which is the STAO reference on health and safety for secondary school science.

Guidance on safe handling and dispensing of chemicals can be found on pages 34 to 41 of *Stay Safe!* and specific guidance on storage is on pages 40 and 41.

We would note that in the event of an accident involving these kits, the failure to label the solutions would likely lead to a criminal investigation under the *OHS Act*, with adverse effects on the teachers, department head and principal involved.

**QUESTION #44:** *With respect to shelving in chemical storage areas, the STAO "Science Laboratory Facilities Design Guide" (1999) states that "The shelves should have a rim to prevent bottles falling off" (p.39). However, lips aren't mentioned in STAO "Stay Safe!" (Oct, 2002) in the section on chemical storage (p. 40). Further, in the UK, the CLEAPSS publication L14 "Designing and Planning Laboratories" (2000) states "There is no reason to have lips on shelves. Bottles have been broken by hitting the glass on the lip!" (p. 49). What is STAO's current recommendation?*

**RESPONSE:** When the STAO *Lab Facilities Design Guide* was published in 1999 all the then-acknowledged experts, including NSTA, were advocating lips on shelves to prevent bottles from rolling off. However, it can be argued that standing bottles cannot roll of their own accord. It is not in their nature to roll! Accordingly unless earthquakes are a potential problem, there really is no reason to have lips on shelves.

