Mercury rising

We at SSERC have long been telling schools that they should avoid eating and drinking in the laboratory. This is particularly important in a chemistry or microbiology lab but, in reality, there is no need to eat and drink in a lab at all.

There has been a fashion for pupils (and teachers) to carry water bottles with them wherever they go and sip as the whim takes them. This is certainly pleasant but avoiding drinking water for the duration of a lesson, even a double period, is going to have absolutely no negative effects. When weighed against the (still slight but) definite risk of ingestion of harmful chemicals or micro-organisms that may happen if drinking is allowed in the laboratory, the banning of food and drink is simple common sense.

There is, however, a further issue to consider: the use of laboratory equipment in a non-laboratory situation. One of the more common instances is the use of a fridge, usually in the prep room, to store food and drink as well as biological or chemical materials. This is simply not acceptable. There is no need and there is a clear and present danger of contamination.

A more serious, though hopefully less common, example was recently provided by a school who will remain nameless.

- A kettle was taken from the staff base to use in a chemistry laboratory.
- The reasons are obscure but the activity involved the taking of the temperature of the boiling water in the kettle.
- The pupil carrying out this activity had been given a mercury thermometer by mistake. (The school thought they had all been removed from circulation).
- At some point in the activity the thermometer bulb broke in the kettle and the student was either unaware of this or just pretended nothing had happened.
- The kettle was then returned to the staff base where it was used for making cups of tea and coffee.
- The following morning (or possibly the one after) one member of staff went to clean out his or her mug and noticed little droplets of mercury in the bottom!

Little droplets of mercury at the bottom of the mug.

At this point the alarm was raised. Investigations at SSERC suggest that the risk to those staff members who used the kettle is very low indeed. There was only a small amount of mercury present to start with, it is only sparingly soluble in water and metallic mercury is absorbed extremely poorly from the digestive system. But the whole affair could have been avoided by simply not using the staff base kettle for the experiment in the first place. <<