



Dangers when smelling gases

In the past, there have been reported incidents of pupils **who** have been told to smell a gas, and as a result have inhaled dangerously large quantities of the gas, sometimes necessitating hospital treatment. Chlorine has caused particular problems in this respect.

It is of course normal practice in teaching chemistry at all levels that students should learn the odours of a variety of chemicals. Quite apart from being a useful analytical tool it is an essential safety requirement so that students can learn to recognise potentially dangerous situations. There is a well-established technique, which students should be taught. It may be that some teachers are not aware of the technique.

Problems would not be expected with solids or most liquids, as there will be insufficient vapour to cause harm. In the case of gases or very volatile liquids, the chemical should be used in small amounts, e.g. in a test tube, and for gases well diluted with air. The test tube is then placed about 5 to 10 cm away from the nose, pointing away from the face, and the hand used to gently waft the vapours towards the nose. The student should sniff gently, not inhale deeply. If no odour can be detected, the test tube can be moved cautiously a little closer to the nose. When the test is carried out in this manner problems should not arise.