



Picric Acid

There have been several reports in the media recently of problems over the disposal of picric acid (2, 4, 6-trinitrophenol). However, as far as this committee has been able to establish, there has never been any accident in a school during its use or disposal.

Whilst it is true that picric acid is explosive, it is difficult to detonate: when used as an explosive during the First World War, TNT was added to act as detonator. There is considered to be no explosion risk provided that the picric acid is stored wet. The extent of the risk when dry may be judged by the fact that at one time it was commonly sold by manufacturers as a dry powder. Note, however, that the metal salts of picric acid (picrates) are very sensitive - dangerously so- and are used as detonators. Care must therefore be taken to prevent accidental salt formation. Perhaps the greatest hazard from the free acid is its toxicity: its TLV is 0.1 mg m⁻³ by skin absorption.

In the past picric acid has had two main uses in schools. One is an extremely powerful acid dye. The other is as a component of biological fixatives and stains. If schools wish to continue using picric acid for these purposes there seems no good reason to stop, -providing that it is stored wet. Schools should in any case be making regular checks of their chemical stocks - and especially of those which may deteriorate on storage (e.g. potassium). Picric acid samples should be checked for dampness at the same time.

Unwanted samples may be disposed of by dissolving in a large volume of water, and slowly flushing away: take care to avoid the solution accumulating in a dilution trap.