

Health and Safety Services
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To Vice-President/Deans, Heads of Schools, as appropriate
From Dr Melanie Taylor, University Safety Advisor
Date 12 January 2007
cc Prof M Case, Dr J Brider, Dr S A Robson, Prof P Heggs,
School Safety Advisors & Safety Representatives as appropriate
Reference Circular 1/2007

Picric acid & other desensitised explosives

A number of schools have reported the presence of picric acid and other desensitised explosives in their responses to my circular 17/2006, 18 December 2006. A few researchers have also reported difficulties in ordering new stock, as reputable suppliers now require evidence of registration and/or certification under the Manufacture & Storage of Explosives Regulations 2005 (MSER).

I will be able to advise further about the various consents researchers will need, after meeting with GM Police to discuss the collective findings of your returns to circular 17/2006. In the short-term, your researchers may find the following notes helpful:

Picric acid – classification of 2,4,6 trinitrophenol under UN regulations for transport is determined by water content. There are 2 relevant UN numbers, UN3364 ($\geq 10\%$ water by mass), and UN 1344 ($\geq 30\%$ water by mass). Picric acid products marketed and transported in formulations that trigger these classifications for transport also trigger the requirements for registration and certification under MSER. There are products used for fixing tissue which contain picric acid at much lower concentrations (for example, Bouin's fixative, 0.9% picric acid). Researchers should consider buying in ready-made products without the need for MSER documentation (and without the risks of handling and storing picric acid) where these are available, and should contact their suppliers for details and options.

1-hydroxybenzotriazole (HOBt) – the Safety Office has had enquiries from several schools about ordering HOBt, as suppliers are unable to fulfil orders without proof of documentation. HOBt hydrate is classed as a desensitised explosive for transport (UN 3380), and therefore triggers the MSER requirements for registration and certification. It is used commonly in peptide synthesis, but one supplier has published information that suggests its use may not be necessary: http://www.emdbiosciences.com/SharedImages/Novabiochem/02_06_innovE.pdf Researchers wishing to use HOBt should consider whether this paper is relevant to their particular work before proceeding with any new order. The Safety Office would be grateful for any observations on this information, and its relevance to work carried out at the University.

I would like to remind senior managers and all researchers that the primary legal duty under the Control of Substances Hazardous to Health Regulations 2002 (as amended) is to prevent exposure, as far as this is reasonably practicable. Elimination, or substitution with safer products should always be used in preference to other strategies to control exposures.

Dr Melanie Taylor
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