

COSHH Guidance **Glutaraldehyde**

for managers in the NHS



Uses

Disinfection agent in "Cidex", "Asep" (2% solution).

This guidance is largely of historical interest since glutaraldehyde should be substituted for other materials. Elements of it would be applicable to similar substances with sensitizing properties.

Harmful Effects

Irritant to the skin on contact with the solution, risk of sensitisation leading to allergic dermatitis. Vapour is Irritant to the eyes and respiratory tract. Association with occupational rhinitis and asthma. Short exposures to high concentrations possibly more significant than longer periods at lower concentrations.

Workplace Exposure Limit: 0.05 ppm (15 minute average) and 0.05 ppm (8 hour average) Exposures must be reduced as far below this limit as is reasonably practicable.

A useful HSE review of the evidence for harm is given in 'Asthmagens?', ISBN 07176 1465 4, 1997. An HSE sponsored report into alternatives is due to be published soon.

Exposure

All work involving skin contact with the liquid carries a risk of irritation and dermatitis.

Vapour exposures should be well below the exposure limit if disinfection is carried out in a sealed automatic unit, or in a partial enclosure with well-designed local exhaust ventilation (eg fume cabinet). Residual contamination of instruments and of the disinfection chamber seems to be unavoidable; this leads to perceptible odour which may cause reaction in sensitive staff.

Excessive exposures to vapour are highly likely if troughs of glutaraldehyde are left open for long periods. If lids are always in place (except for occasional, short access) and room ventilation is very good, vapour exposures should be within exposure limit. Residual contamination of eyepieces causes contact exposure to surgeons (reduced by the move towards video displays). Manual pouring of waste produces high exposures and should be avoided using enclosed drainage. Exposures during manual rinsing are usually very brief but may be excessive if it takes longer than 2 minutes without local ventilation. Spillage produces unpredictable exposures; this requires a spillage procedure - see separate guidance note.

Precautions

Eliminate or reduce use: maximise use of other disinfection techniques. The growing list of substitutes which are safer and more effective makes its continued use hard to justify under COSHH Regulation 7. There is no single substitute for all applications; careful selection is required in consultation with the infection control team.

Direct skin contact with glutaraldehyde solutions must be avoided. Nitrile gloves give adequate protection for short periods. Eye protection (visor or goggles) must be worn if there is a danger of splashing.

A sealed washer-disinfector or fume cabinet and avoidance of manual pouring are basic requirements. Exceptions may be made where quantities are small, room ventilation is good and close fitting lids are kept in place. Rinsing should also be undertaken in the fume cabinet if possible. Otherwise, a high ventilation rate is necessary. Excellent rinsing of eyepieces (perhaps in addition to that performed automatically) is required to prevent residues affecting surgeon. Seek expert advice for all such complications.

General room ventilation should be at least 10-15 air changes an hour; more may be needed if room is small.

Regular health surveillance is needed for all exposed staff. If anyone shows skin or respiratory symptoms, they may be at risk of allergy and asthma. Remove them from exposure until advice is obtained; inform the health and safety adviser and refer affected staff to the occupational health service. Careful consultation is required with OHS on the health criteria for recruiting staff. Pre-employment medicals should be routine.

Ensure staff are fully informed of the risks; establish local rules, maintenance of equipment, spillage procedures; ensure rigorous implementation by appropriate monitoring.

Guidance note 0106, June 2006: by practitioners in the field to assist in assessing and controlling risks.

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