

Source	Hazard	Comment
Disinfectants containing active chlorine, eg, Domestic, Milton	varies	Effective against wide range of microorganisms. Less suitable for dirty conditions because disinfectant is degraded by organic matter. They corrode metals and generate toxic chlorine with acids. A good choice where blood is involved but use is discouraged by some employers. Requires a contact time of at least 15 minutes. See CLEAPSS <i>Student Safety Sheet 41</i> , Sodium chlorate(I) (sodium hypochlorite).
Disinfectants containing methanal (formaldehyde)	varies	Very effective at killing microorganisms but more concentrated solutions are hazardous. See CLEAPSS <i>Student Safety Sheet 67</i> , Methanal.
Ethanol, 70%, industrial denatured alcohol (IDA) 70%	 HIGHLY FLAMM.  IRRITANT  HEALTH HAZARD	Active against most bacteria, viruses and fungi, within 5 minutes. Mainly useful for swabbing benches immediately before preparing cultures or for rapid disinfection of mouthpieces, dental mirrors, etc – rinse with clean water after sterilisation. DANGER: highly flammable, harmful by ingestion, may cause damage to organs, causes serious eye irritation. See CLEAPSS <i>Student Safety Sheet 60</i> , Ethanol.
VirKon, powder	 CORROSIVE	Main active component is dipotassium peroxomonosulfate, which oxidises the infective material. Powder can be poured directly onto liquid spills, but is usually dissolved in water. DANGER: causes severe skin irritation and serious eye damage.
VirKon, 1% aqueous solution	Currently not classified as hazardous	Very effective with 10 minutes contact against bacteria, fungi and viruses. Solution attacks metal after 10 minutes. The best choice for most situations.
Phenolic disinfectants	varies	Clear phenolics have been phased out under the <i>Biocidal Products Regulations</i> . Other phenolics (white or black, eg <i>Jeyes Fluid</i> , <i>Izal</i> , <i>Lysol</i> ) are less effective and some are TOXIC/CORROSIVE. Not generally recommended for laboratory use.

### Typical control measures to reduce risk

- Where possible, avoid the use of disinfectants classed as TOXIC or CORROSIVE and use freshly-made solutions.
- Wear eye protection, including when making or disposing of solutions.

### Assessing the risks

- What are the details of the activity to be undertaken? What are the hazards?
- What is the chance of something going wrong?  
*eg is the disinfectant effective against the organisms likely to be present and will it be left long enough to be effective?*
- How serious would it be if something did go wrong?  
*eg could a failure of disinfection lead to a serious illness?*
- How can the risk(s) be controlled for this activity?  
*eg can it be done safely? Does the procedure need to be altered? Should goggles or safety spectacles be worn?*

### Emergency action

In all emergency situations, alert the responsible adult immediately. Be aware that actions may include the following:

- Sodium chlorate(I) incidents See CLEAPSS *Student Safety Sheet 41* if sodium chlorate(I) used.
- Hazardous chemicals in the eye Irrigate the eye with gently running tap water for at least 20 minutes. Call 999/111.
- Hazardous chemicals in mouth/ swallowed Do no more than rinse and spit with drinking water. Do **not** induce vomiting. Call 999/111.
- Spilt on the skin or clothing Brush off solids. Irrigate the affected skin area with gently running tap water for 20 minutes. Call 999/111 as appropriate.
- Spilt on the floor, bench, etc Wear eye protection. Scoop up any solid and wipe up small amounts with a damp cloth and rinse it well. Cover solutions with mineral absorbent (eg, cat litter) and scoop into a bucket. Rinse well.