



DISINFECTION

KEY POINTS

Cleaning is the key to disinfection

Use detergents in the first instance

Chemical disinfection is rarely needed in hospitals

Single use 2(symbol crossed) devices must never be reprocessed or re-used

All spillages must be cleaned up promptly with proper protective clothing (See Spillage Policy)

AVAILABILITY OF ANTISEPTICS AND DISINFECTANTS

Disinfectants and antiseptics are expensive and often ineffective so they tend to be used excessively and ineffectually. The most effective means of disinfection, that is the reduction of microbial contamination, is thorough cleaning. Chemical disinfectants are ineffective in the presence of dirt. They may be inactivated by dirt, biological fluids or by rubber. They may destroy certain substances, particularly rubber and metal. Antiseptics may reduce bacterial counts on the surface of the skin or a wound but rarely enhance and more likely will interfere with healing.


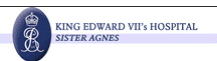

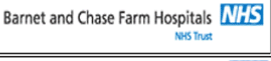




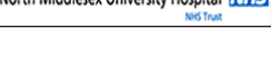
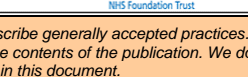
DOMESTIC CLEANING AGENTS

General purpose detergent (G.P.D.)-
 Cream cleanser (C.C.)-
 Floor maintainer-
 Floor polish-
 Floor stripper-
 Toilet descaler-
 Carpet cleaner-
 Terrazzo cleaner-
 Stainless steel descaler-
 Steel cleaner-
 Glass cleaner-
 Wax furniture polish-
 Cream furniture polish-
 Metal polish-
 Chewing gum remover-
 Graffiti remover-

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STOCK LIST OF ANTISEPTICS AND DISINFECTANTS

Stock lists (examples)	Example of brand	Intended usage
ALCOHOLS 70% Methyl alcohol spray	<i>IMS spray</i>	Hard surface disinfection
70% Isopropyl alcohol wipes 70% Isopropyl alcohol swabs	<i>Azowipes or Cliniwipes Sterets or Mediswab</i>	Hard surface disinfection Skin disinfection pre-cannulation
Alcohol gel	<i>Various</i>	Hand hygiene on wards
CHLORHEXIDINES Chlorehexidine 0.5% in 70% alcohol Chlorhexidine gluconate liquid 4% Chlorhexidine gluconate 0.015%/Cetrimide 0.15% solution	<i>Acoholic chlorhexidine Hibiscrub surgical scrub Savlodil or Tisept sachets</i>	Skin disinfection Hand washing Skin disinfection (urinary catheterisation)
CHLORHEXIDINES Chlorehexidine 0.5% in 70% alcohol	<i>Acoholic chlorhexidine</i>	Skin disinfection
IODOPHORS Alcoholic povidone iodine 10% Aqueous povidone iodine	<i>Betadine alcoholic solution 10% Betadine antiseptic solution</i>	Pre-op skin preparation Mucous membranes (not skin prep)
Povidone iodine 7.5% solution	<i>Betadine surgical scrub</i>	Hand washing
IODOPHORS Alcoholic povidone iodine 10%	<i>Betadine alcoholic solution</i>	Pre-op skin preparation
CHLORINE RELEASING AGENTS Sodium Dichloroisocyanurate solution tablets 4.75 g (= 2.5 g available chlorine)	examples <i>HAZ-TABS tablets</i>	Spillages of body fluids
granules 500g	<i>PRESEPT ACTICLOR HAZ-TABS granules</i>	Spillages of body fluids
CHLORINE RELEASING AGENTS Sodium Dichloroisocyanurate solution	examples	

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**RESTRICTED ISSUE LIST OF
ANTISEPTICS AND DISINFECTANTS**

Product	Example of Brand	Issued to
CHLORHEXIDINES		
Chlorhexidine gluconate 0.5% sterile aqueous solution	<i>Hibidil/Unisept</i>	Operating Departments.
Chlorhexidine 2.5%/70% alcohol solution in glycerine base	<i>Hibisol handrub</i> or equivalent	Special wards (eg ICUs, NNU, etc) as requested by Infection Control Team. Source Isolation. Orthopaedic surgery.
Staining alcoholic chlorhexidine Chlorhexidine cream 1% Chlorhexidine 5% cream Chlorhexidine gluconate 0.2% aerosol spray Chlorhexidine powder Neomycin sulphate 0.5% chlorhexidine hydrochloride 0.1%	<i>Hibitane</i> Rotersept CX Antiseptic <i>Naseptin cream</i>	By prescription. Obstetric Hospital. Obstetric Hospital. Staph eradication. Obstetric Hospital.
IODOPHORS		
Povidone iodine 2.5% dry powder spray Povidone iodine 4% shampoo Povidone iodine 4% cleanser Povidone iodine 7.5% scalp/ski cleanser	Betadine	A&E Dept. ICU PPW2, or as requested by clinical nutrition nurses. Dermatology Depts. or by prescription.
HYPOCHLORITE		
Sodium hypochlorite 0.3-0.4% solution	<i>Chlorasol sachets</i>	By prescription only
ALDEHYDE		
Glutaraldehyde 2% solution (activated)	<i>Cidex</i>	Being phased out
ALTERNATIVE		
Peracetic-acetic acid	<i>Nu Cidex</i>	Endoscopy and Operating Depts., (OP Clinics, ITU) if approved installation. Endoscopy, etc.
MISCELLANEOUS		
Note: These products are ineffective and potentially toxic. Their use is to be discouraged.		
Potassium permanganate 2% solution Cetrimide 1% sterile solution Hydrogen peroxide cream 1.5% Noxythiolin 2.5 gms, Noxythiolin 2.5 g/amethocaine powder 1g* Hydrogen peroxide 3% solution (10 vols)		

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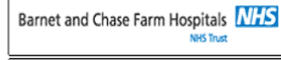
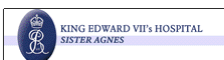
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Povidone-iodine 10% solution TOPICAL ANTIBIOTICS		
Mupirocin nasal and skin ointments 2%	Bactroban	For staphylococcal protocol as requested by Microbiology or Dermatology Depts. Alternative staphylococcal eradication policy
Neomycin cream	Naseptin	
**Both available only by prescription		

KEY TO CLEANING PROCESSES

General purpose detergent GPD

Damp dust or wash with a fresh solution of hand-hot water with general purpose detergent (eg 1 capful per gallon). Rinse and dry thoroughly with a disposable cloth.

Washer-Disinfector WD

Ward level washers are being increasingly used for reprocessing objects that need to be socially cleaned such as urine jugs. The bedpan washer is an example of a washer-disinfector

Cream Cleanser CC

Wash with cream cleanser or hypochlorite scouring powder. Rinse thoroughly and dry with a disposable cloth.

Chlorine-releasing agent CRA*

Chlorine releasing agents (dichloroisocyanurate)

i. SOLUTION

4x2.5g "Haz tabs" in 1 litre water gives 10,000 ppm free chlorine.

ii. GRANULES

Pour chlorine releasing granules or fresh solution onto the blood or body fluid spillage. Allow the body matter to be absorbed for a minimum of five minutes, then mop up the spillage. Wash the area with GPD, rinse and dry. Make sure the area is well ventilated.

Chlorine disinfection indicated for cleaning equipment following contamination with body fluids from HBV or HIV positive patients. Note that these agents damage metals and rubber. Ensure that solutions are wiped off and equipment cleaned with GPD, rinsed and dried.

Fresh solution may be used to wipe surfaces in a clinical area after discharge of a patient in source isolation (especially for MRSA, Group A streptococcus, diarrhoea etc).

Phenolic PNC

After thorough washing with GPD, immerse or wipe equipment with phenolic solution (e.g. Hycolin 2%). This is sometimes recommended after contact with MRSA, Group A streptococcus, or gentamicin-resistant organisms. This type of disinfection is rarely required because proper cleaning should be adequate. Seek advice from the Infection Control Nurse. If not available, use fresh CRA.

Alcohol ALC

After washing with GPD, wipe over with 70% alcohol (industrial methylated spirit or isopropyl alcohol)

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solution. This is provided in spray bottles, or individually wrapped sachets or disposable wipes. Use no naked flame in the vicinity. Alcohol gel including emollient is used for skin disinfection.

Single use SU

Single-use disposable item must not be re-used.

Central or Theatre Sterile Supply Department SSD

Return to Sterile Supply Department for reprocessing (cleaning, packing autoclaving).

Heat-sensitive equipment HSE

Equipment for sterilisation which will be destroyed by autoclave temperatures must be processed by special methods. Different methods are available in different hospitals.

Alternatives for endoscopes, etc include peracetic acid/ acetic acid solution (Nu-Cidex) or chlorine dioxide (Tristel). Detailed policies for endoscopic disinfection are given in this manual (See policy for Decontamination of Fibre-optic Endoscopes).

SAFETY NOTES

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH

*Glutaraldehyde and chlorine releasing agents are of particular concern in relation to the "Control of Substances Hazardous to Health Regulations", 1994.

STAFF PROTECTION

Avoid eye and skin contact with all disinfectant solutions. Wear gloves when handling or preparing disinfectants. Irrigate eye splashes with sterile water or saline as soon as possible if accidentally exposed to these agents. Wash off skin splashes under running water. If contact or injury occurs, report immediately to the Occupational Health Department or Accident and Emergency Department for advice. Complete an Incident Form.

Glutaraldehyde

The use of glutaraldehyde has virtually ceased. Glutaraldehyde use is restricted to properly ventilated, approved areas by trained staff.

Chlorine

Because spillage of body fluids may occur in any clinical area, staff must take special precautions when using **CRA (e.g. Haztab granules)**. Splashing may occur and there is intense release of free chlorine. Staff must wear proper protective clothing including eye protection and heavy duty domestic quality gloves. The area should be ventilated as far as possible and staff and patients kept away until the spillage is cleared up.

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NOTE: It is dangerous to put chlorine releasing granules on a large liquid volume spill such as urine.

See policy for Spillages

PATIENT PROTECTION

When used for skin preparation before surgery, extreme care has to be taken to make sure that **alcoholic disinfectant solutions** are not used in excess and do not pool behind the patient's body. There have instances of severe burns arising from igniting alcohol by thermocautery.

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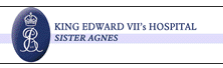







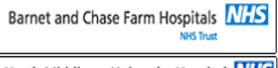

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