# Department of Agriculture, Fisheries and Forestry

# Broad Spectrum Disinfectants

## Suitable for disinfection of surfaces and equipment at Approved Arrangements (AA) sites Biosecurity Containment (BC1-4) - classes 5, 6 and 7 (excluding class 7.10 – fertile poultry hatching eggs facilities and class 7.12 – live horses)

| **Types of broad spectrum chemical disinfectants** | **Approved active ingredients and examples of disinfectants** | **Facility type** | **Parameters for use.**  **Note: minimum rates must be used** |
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| **Aldehydes** | 2% glutaraldehyde  e.g. Aidal | Microbiological, animal | * Glutaraldehyde – 2% undiluted solution * Contact time – 10 minutes |
| **Halogen** | Chlorine  e.g. Sodium hypochlorite | Microbiological, animal, plant and invertebrates | * Sodium hypochlorite - 1% available chlorine - 200ml to 800ml of potable water * Contact time - 10 minutes   Note: Care should be taken when diluting these solutions to ensure a final working concentration of 1% is achieved. These calculations are based on using a 5% sodium hypochlorite product. If using 4% sodium hypochlorite product, adjust accordingly. |
| **Oxidizing agents** | Pentapotassium bis (peroxymonosulphate)  40-55%,  Sodium Chloride 1-2%  Sulphamidic acid 4-6%  e.g. Virkon | Microbiological, animal, plant and invertebrates | * Virkon - 10g to 1 litre of water * Contact time - 10 minutes. |
| **Alcohols** | Ethanol | Microbiological, animal, plant and invertebrates | Ethanol - 80% v/v (for example 800ml Ethanol and 200ml of water) -  (refer to AS/NZS 2243.3)  Contact time - 10 minutes. |
| **Alcohols** | Isopropyl | Microbiological, animal, plant and invertebrates | * Isopropyl – 60% v/v – 70% v/v (for example 600ml Isopropyl and 400ml of water, or 700ml Isopropyl and 300ml of water) * Contact time - 10 minutes. |
| **Phenolics** | Sodium hydroxide,<10%,  clorofene <10%,  o-phenylphenol  10-<30%  e.g. Biogram | Plant | * Biogram - 5% v/v- 50ml to 950ml of water * Contact time - 10 minutes. |
| **Quaternary ammonium compounds** | Benzalkonium chloride 54g/L, Polyhexamethylene Biguanide Hydrochloride 4g/L  e.g. F10SC, Safe4 | Microbiological, animal, plant and invertebrates | F10SC   * + 1:500 2ml to 998ml of water   + 1:250 4ml to 996ml of water   + 1:125 8ml to 992ml of water. * Contact time and level   + 1 minute – for general disinfection (hard services)   + 10 minutes – for high level disinfection (including fungal spores)   + 30 minutes – high level - for resistant viruses and spores * Safe4   + 1:100 10ml to 990ml of water * Contact time   + 15 minutes – for fungi   + 30 minutes – for viruses and bacteria |
| **Quaternary ammonium compounds** | Alcohol ethoxylate  20-25%,  Quaternary ammonium compounds (benzyl-alkyldimethyl chlorides 10-20%,  Poly (hexamethylene  biguanide) hydrochloride 5-10%  e.g. Vantocil FHC | Plant | * Vantocil FHC - 5ml to 495 ml of water * Contact time - 5 minutes. |
| **Quaternary ammonium compounds** | Benzalkonium chloride 10%  e.g. Phytoclean | Plant | * Phytoclean - 20ml to 980ml of water * Contact time - 30 seconds. |
| **Quaternary ammonium compounds** | N-Alkyl(C12-16)-N,  N-dimethyl-N- Benzylammonium chloride 10-30%,  Poly(hexamethylene  biguanide) hydrochloride  10-30%  e.g. Klercide-CR- Biocide X | Microbiological, animal and plant | * Klercide-CR- Biocide X - 100ml to 4,900ml of water * Contact time - 5 minutes. |
| **Quaternary ammonium compounds** | Isopropyl alcohol 17.20%, Benzalkonium chloride 0.28%  E.g. CaviCide | Microbiological, animal | * CaviCideTM * Ready-to-use solution * Contact time – 10 minutes. |
| **Quaternary ammonium compounds** | Didecyl dimethyl ammonium chloride 75g/l,  Benzalkonium chloride 50g/l, Polihexanide (giguanide) 1.0g/l  e.g. Trigene II | Microbiological, animal | * Trigene II - 1:100 10ml to 990ml of water * Contact time – 10 minutes. |
| **Quaternary ammonium compounds** | Didecyl dimethyl ammonium chloride 78 g/l,  Alkyl dimethyl benzyl, ammonium chloride 170 g/l,  Glutaraldehyde 107 g/l  e.g. Virocid | Microbiological, animal | * Virocid   + 1:200 5ml to 995ml of water   + 1:400 2.5ml to 997.5ml of water * Contact time and level   + 1:200 - 10 minutes for high level disinfection   + 1:400 - 10 minutes for disinfection of most bacteria, viruses, moulds and yeasts |
| **Alkalis** | Sodium hydroxide (caustic soda) (2% solution)  e.g. Sodium hydroxide | Microbiological, animal | * Sodium hydroxide - 2% - 20g to 1 litre of water * Contact time - 10 minutes. |

**Notes:**

* The above are disinfectants for use when decontaminating equipment, spillage areas or situations as directed by the Department of Agriculture, Fisheries and Forestry.
* Contact Avian Imports for advice on disinfectants for use at class 7.10 – fertile hatching eggs facilities, at [avianimports@aff.gov.au](mailto:avianimports@aff.gov.au)
* Contact Horse Imports for advice on disinfectants for use at class 7.12 – live horses, at [horses@aff.gov.au](mailto:horses@aff.gov.au)
* Biosecurity industry participants should also contact their respective State/Territory governments to check what chemicals are approved in their States/Territory.
* Equipment and surfaces should be cleaned and free from organic material and grease prior to any form of disinfection or decontamination.
* The parameters are minimum concentration rates and contact times. Chemicals must be applied in accordance with the label directions.
* Disinfectants that have the same active ingredients, and equal parameters will not require approval from the department.
* Requests for disinfectant approval can be forwarded to [aa.canberra@aff.gov.au](mailto:aa.canberra@aff.gov.au)

In times of disease outbreak emergencies, consult with your regional office for alternative sources of information in relation to specific diseases.

## Version control

Updates to this document will occur automatically on the department’s website and the revision table below will list the amendments as they are approved.

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