# 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% glutaraldehydee.g. Aidal | Microbiological, animal | * Glutaraldehyde – 2% undiluted solution
* Contact time – 10 minutes
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| **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.
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| **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.
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| **Phenolics** | Sodium hydroxide,<10%, clorofene <10%,o-phenylphenol10-<30%e.g. Biogram | Plant | * Biogram - 5% v/v- 50ml to 950ml of water
* Contact time - 10 minutes.
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| **Quaternary ammonium compounds** | Benzalkonium chloride 54g/L, Polyhexamethylene Biguanide Hydrochloride 4g/Le.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
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| **Quaternary ammonium compounds** | Alcohol ethoxylate20-25%,Quaternary ammonium compounds (benzyl-alkyldimethyl chlorides 10-20%,Poly (hexamethylenebiguanide) hydrochloride 5-10% e.g. Vantocil FHC | Plant | * Vantocil FHC - 5ml to 495 ml of water
* Contact time - 5 minutes.
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| **Quaternary ammonium compounds** | Benzalkonium chloride 10%e.g. Phytoclean | Plant | * Phytoclean - 20ml to 980ml of water
* Contact time - 30 seconds.
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| **Quaternary ammonium compounds** | N-Alkyl(C12-16)-N,N-dimethyl-N- Benzylammonium chloride 10-30%, Poly(hexamethylenebiguanide) 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.
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| **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.
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| **Quaternary ammonium compounds** | Didecyl dimethyl ammonium chloride 75g/l,Benzalkonium chloride 50g/l, Polihexanide (giguanide) 1.0g/le.g. Trigene II | Microbiological, animal | * Trigene II - 1:100 10ml to 990ml of water
* Contact time – 10 minutes.
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| **Quaternary ammonium compounds** | Didecyl dimethyl ammonium chloride 78 g/l,Alkyl dimethyl benzyl, ammonium chloride 170 g/l,Glutaraldehyde 107 g/le.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
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| **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.
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**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
* Contact Horse Imports for advice on disinfectants for use at class 7.12 – live horses, at 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

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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| Date | Version | Amendments | Approved by |
| 16 July 2024 | 1.0 | Final version | Caroline Gibson |
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