mirius™
global hygiene solutions

Virucidal WP

A DEFRA-approved, highly versatile, broad-spectrum disinfectant, offering protection against the threat of infectious poultry and livestock diseases.

- **Designed to be used as part of both continuous and terminal disinfection programmes**
- **Ideal for use as part of emergency disease control programmes**
- **Independently tested with proven efficacy against bacteria, viruses, yeasts and moulds**

How it works

Virucidal WP's active ingredient is Potassium Monopersulphate (KMPS), which is blended with a surfactant, organic acids, chelant and salt to give highly effective and powerful disinfection when diluted in water, even in the presence of organic soil. KMPS is an oxidizing agent, which causes irreparable damage to the cellular components and nucleic acid of a wide spectrum of microorganisms. KMPS interacts with the sodium chloride in the **Virucidal WP** formulation to produce Hypochlorous acid (HOCl) to increase the disinfectant power.



Virucidal WP Benefits

- Rapidly destroys bacteria and inactivates viruses
- Effective in both hard and soft water regions
- Effective in the presence of organic soil
- Performs at both hot and cold temperatures
- Superior solubility, no rinse, residue free formulation
- Non-corrosive in dilution
- Suitable for use in drinking water systems. Optimal pH for poultry drinking water in UK is 4.1. The pH of **Virucidal WP** at 1:1000 is 4.6
- Reduces scale and biofilm build up, helping to maintain internal pipe diameter and water flow
- Components are readily biodegradable according to the OECD and EU test methods
- All ingredients in **Virucidal WP** are REACH registered and comply with European regulations and contain no substances classified as PBT (Persistent Bioaccumulative and Toxic) or vPvB (very Persistent, very Bioaccumulative)

Virucidal WP Applications

- General surface and equipment disinfection
- Boot baths
- Vehicle sprays and wheel dips
- Aerial misting in the presence of livestock (mist to be applied above the livestock, not sprayed directly at them)
- Livestock drinking water

Virucidal WP Use Dilutions

- General use for animal housing and equipment **1:200**
- For emergency disease application- use DEFRA approved dilution for the specific disease order or General Orders dilution if organism is not known or outside the DEFRA orders
- Boot baths and vehicle dips **1:100** (change solution after 3 days or sooner if heavily contaminated)
- Aerial misting **1:200**
- Continual use in drinking water system **1:1000**
- Terminal flush of drinker systems **1:100**

Application and Use Guidance

It is recommended to prepare solutions of **Virucidal WP** in plastic or stainless steel equipment. Do not prepare or store in anything rusty, rust can deactivate solutions. Store sealed in original packaging in a cool dry place, in temperature not exceeding 30°C. Protect from frost.

Terminal Disinfection

House and Equipment: Use at 0.5% w/v (1:200) 5g per litre or at 1% w/v if disease challenge is higher. Apply as a wet spray using a fan jet nozzle or volume sprayer to precleaned, dry surfaces. **Virucidal WP** can be used for one-step disinfection programmes as a total house and equipment disinfectant. For multi-step programmes, apply **Virucidal WP** as the first disinfectant. Apply disinfectant solution at 300ml per m^2.

Surface area to be disinfected	Amount of disinfectant solution required	Amount of **Virucidal WP** required for area (kg) at 1:100 dilution	Amount of **Virucidal WP** required for area (kg) at 1:200 dilution	Amount of **Virucidal WP** required for area (kg) at 1:70 dilution
$50m^2$	15 litres	0.15	0.075	0.21
$100m^2$	30 litres	0.3	0.15	0.42
$250m^2$	75 litres	0.75	0.38	1.1
$500m^2$	150 litres	1.5	0.75	2.1
$1,000m^2$	300 litres	3.0	1.5	4.2
$2,000m^2$	600 litres	6.0	3.0	8.4

Disinfectant Boot Baths

Use a 1% (1:100) solution as part of a Danish entry system: change boots on entry to each house. Prewash boots in a water bath or automatic boot cleaner before disinfection. Prepare solution and place boot dip tray out of direct sunlight. Change solution every 3–4 days or sooner if heavily soiled.



Water Disinfection

Terminal disinfection of drinking water system:
Use at 1% (1:100). Suitable for systems with a header/supply tank.

1. Close off water inlet and drain system.
2. Fill supply tank with water and add product.
3. Draw solution through to all pipe ends and leave for minimum 4 hours.
4. Ensure all nipples/drinkers are drained.
5. Drain system and observe water quality.
6. Refill and flush system. Repeat if water remains dirty.
7. Optional: Use endoscope kit to inspect pipe interiors.



Drinking water disinfection and acidification (subject to local authority approval).

Prepare a 5% solution in an open container (do not store in closed containers).

Dose prepared 5% solution into water line at:

- 2% for 1:1000 dilution (for periods of expected disease challenge)
- 1% for 1:2000 dilution (default dilution)

Do not apply alongside vaccines, medications, minerals, vitamins or probiotics.

Check final water pH to confirm target level.

Volume of water to be disinfected	Cleanout disinfection 1:100 dilution	Terminal disinfection of water equipment 1:200	Continuous water disinfection 1:1000
Amount (kg) **Virucidal WP** required			
100 litres	1.0	0.5	0.1
250 litres	2.5	1.25	0.25
500 litres	5.0	2.5	0.5
1,000 litres	10.0	5.0	1.0

Aerial

Aerial misting (subject to local authority approval): Use at 0.5% (1:200). Apply as a coarse spray (35–50 microns) at 2 metres above housed birds. Do not spray directly at birds. If fans are running, apply while walking away from vents. Dilution and frequency depend on the level of pathogen pressure. Apply disinfectant solution at 1L per 10m² floor space.



Surface area to be disinfected	Amount of disinfectant solution required	**Misting** Amount of **Virucidal WP** required for area (kg) at 1:200 dilution
50m²	5 litres	0.25
100m²	10 litres	0.5
250m²	25 litres	1.25
500m²	50 litres	2.5
1,000m²	100 litres	5.0
2,000m²	200 litres	10.0

Test Data

Virucidal WP is approved by DEFRA under the following approvals

Foot and Mouth Disease Orders	1:1300
Swine Vesicular Disease Orders	1:100
Diseases of Poultry and the Avian Influenza and Influenza of Avian Origin in Mammals Order	1:200
General Orders	1:70

Bactericidal Test Data

Organism	Test Method	Disease	Dilution
Pseudomonas aeruginosa	EN1656 Suspension Test	Mastitis	1:200
Staphylococcus aureus	EN1656 Suspension Test	Mastitis	1:200
Enterococcus hirae	EN1656 Suspension Test	Septicaemia	1:200
Proteus vulgaris	EN1656 Suspension Test	Various	1:200
Proteus hauseri	EN1656 Suspension Test	UTI	1:200
Bordatella bronchiseptica	EN1656 Suspension Test	Respiratory Infections	1:200
Salmonella enteriditis	EN1656 Suspension Test	Diarrhoea	1:200
Salmonella typhimurium	EN1656 Suspension Test	Diarrhoea	1:200
Listeria monocytogenes	EN1656 Suspension Test	Listeriosis	1:150
Streptococcus equi	EN1656 Suspension Test	Strangles	1:200
Streptococcus suis	EN1656 Suspension Test	Meningitis and Septicaemia	1:200
Ornithobacterium rhinotracheale	EN1656 Suspension Test	Respiratory disease in poultry	1:200
Bordetella avium	EN1656 Suspension Test	Respiratory disease in poultry	1:200
Campylobacter jejuni	EN1656 Suspension Test	Campylobacteriosis	1:200
Klebsiella pneumoniae	EN1656 Suspension Test	Various	1:200
Pseudomonas aeruginosa	EN16437 Porous Surface Test	Mastitis	1:200
Proteus hauseri	EN16437 Porous Surface Test	UTI	1:200
Staphylococcus aureus	EN16437 Porous Surface Test	Mastitis	1:200
Enterococcus hirae	EN16437 Porous Surface Test	Septicaemia	1:200
Pseudomonas aeruginosa	EN14349 Non Porous Surface Test	Mastitis	1:150
Proteus hauseri	EN14349 Non Porous Surface Test	UTI	1:200
Staphylococcus aureus	EN14349 Non Porous Surface Test	Mastitis	1:200
Enterococcus hirae	EN14349 Non Porous Surface Test	Septicaemia	1:200

Virucidal Test Data

Virus	Test Method	Disease	Dilution
ASF	EN14675	African Swine Fever	1:800
Bovine Enterovirus	EN14675	Enteric Cytopathic Bovine Orphan (EBO) Virus	1:200
Foot and Mouth Disease Virus	DEFRA	Foot and Mouth Disease	1:1,300
Swine Vesicular Disease Virus	DEFRA	Swine Vesicular Disease	1:100
Newcastle Disease Virus	DEFRA and EN14675	Newcastle Disease	1:200
Avian Influenza H1N1	EN14675	Influenza and Swine Flu	1:1,000
Aujeszkys Disease Virus	EN14675	Aujeszkys Disease	1:400
Porcine Reproductive and Respiratory Disease Virus	EN14675	Porcine Reproductive and Respiratory Disease Virus	1:200

Fungicidal Test Data

Organism	Test Method	Disease	Dilution
Candida albicans	EN1657 SuspensionTest	Infections of the oesophagus and crop	1:50
Aspergillus brasiliensis	EN1657 SuspensionTest	Aspergillosis (hatcheries)	1:50
Foot and Mouth Disease Virus	DEFRA	Foot and Mouth Disease	1:1,300

Sporicidal Test Data

Organism	Test Method	Disease	Dilution
Clostridium perfringens (spores)	EN13704	Clostridial enteritis	1:8

Mycobacterial Test Data

Organism	Test Method	Disease	Dilution
Mycobacterium avium	EN14204	Avian tuberculosis	1:75