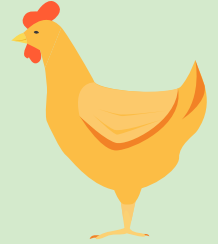


## Cleaning & Disinfection Basics and a List of Disinfectants That Are Effective for Inactivating Avian Influenza Viruses and Are Approved for Animal Husbandry, Farm and/or Veterinary Hospital Use in California

Premises with positive detections of highly pathogenic avian influenza (HPAI) are considered Infected Premises. Infected Premises must be both **CLEANED** and **DISINFECTED**. Cleaning and disinfection practices during an outbreak will focus on virus elimination from the environment.

In previous disease outbreaks, we used conventional wet cleaning followed by applying a disinfectant. Dry cleaning and eliminating the virus through heating houses or fumigation is the preferred method during a widespread HPAI outbreak. Any method(s) selected should consider the characteristics of the premises/houses and other factors which may impact the effectiveness of the virus elimination activities.



### STEP 1

#### CLEANING

Cleaning removes gross contamination, organic material, and debris from the premises or respective structures via mechanical means like sweeping (dry cleaning) or using water, soap, or detergent (wet cleaning). The goal is to minimize the remaining organic material so disinfection can be effective.



#### CLEANING OPTIONS

##### Dry Cleaning

Timing & method of dry cleaning must not aerosolize virus.

and/or

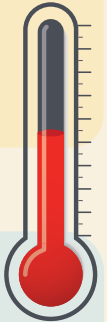
##### Wet Cleaning

High pressure water and detergent is very effective in removing the heavy accumulation of urine and feces often present in the environment and for cleaning porous surfaces. However, in cases of highly infectious or zoonotic pathogens, high pressure systems should be avoided or used with caution to avoid further dispersal of the pathogen or risk to the applicator.

### STEP 2

#### DISINFECTION

Disinfection is used on surfaces to destroy or eliminate HPAI through physical (e.g., heat) or chemical (e.g., disinfectant) means. It may require a combination of methods.



#### DISINFECTION OPTIONS

##### Drying & Heating

(100-120 °F for 7 days total)

At least three consecutive days drying and heating at specified temperature; heating to 100-120 °F must occur for seven days total.

and/or as needed

##### Wet Disinfection

With CDPR (California Department of Pesticide Regulation) approved disinfectant

and/or as needed

##### Fumigation

With CDPR approved disinfectant

or

##### Fogging

With CDPR approved disinfectant

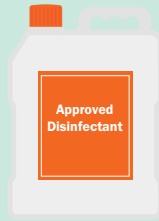
### VIRUS ELIMINATION

During an HPAI Outbreak, we use cleaning and disinfection measures to destroy or eliminate all avian influenza viruses on the premises as cost-effectively as possible.

## Cleaning & Disinfection Basics and a List of Disinfectants That Are Effective for Inactivating Avian Influenza Viruses and Are Approved for Animal Husbandry, Farm and/or Veterinary Hospital Use in California

### DISINFECTANTS (ANTIMICROBIAL PESTICIDES)

Substances or mixtures of substances are used to destroy or suppress the growth of harmful microorganisms such as bacteria, viruses, or fungi on inanimate objects and surfaces. Disinfecting kills a more significant amount and a broader range of germs than sanitizing. Under California law, a “pest” includes any form of virus, bacteria, or other microorganisms. In California, disinfectants are regulated by the California Department of Pesticide Regulations (CDPR) and classified as antimicrobial pesticides.



U.S. EPA registers pesticide products, including disinfectants effective against Avian Influenza A. Currently, approximately 220 disinfectant products are registered and intended for use against avian influenza A viruses on hard, non-porous surfaces. These products are typically used by the poultry industry to disinfect their facilities. More information on California approved HPAI disinfectant products can be found on the [DPR California Product Label Database Application Website](#).

### FOR PREMISES THAT CAN'T BE CLEANED AND DISINFECTED

In circumstances in which premises cannot be cleaned and disinfected, fallowing for 120 days or a period recommended by the Incident Command (IC) is prescribed. The length of this period will vary depending on ambient temperature and season.

Fallowing should be reserved for premises that need to be completely repaired or destroyed to be effectively cleaned and disinfected or where contamination of residences or extensive outdoor areas is likely.

During an HPAI outbreak, inspections at 30, 60, and/or 90 days may occur. An on-site inspection is usually required before a premises is released from quarantine.

### FUMIGATION

Fumigation is the action of releasing a disinfectant in the gaseous state to control a targeted virus. Fumigant formulations may exist in any of the three physical states: liquid, gas, or solid.



Fumigation uses a highly toxic gas, and the health effects of fumigation are more severe if proper and stringent safety checks are not used as compared with fogging. Fumigation is an approved method only if the disinfectant label states that you can use it to fumigate.

### FOGGING

Foggers are pesticide sprays that release all their contents at once. The spray button locks into place, releasing the contents upwards, and filling the air with pesticide. Spray droplets (a fine aerosol, not a fog) remain suspended for a while before gradually settling onto floors, countertops, and other surfaces.

***Both Fumigation and Fogging require professional, licensed, and trained experts for safe and effective application.***

### ORGANIC POULTRY PRODUCERS

When planning to use HPAI antimicrobial pesticides (disinfectants):

- California organic poultry producers must comply with all applicable federal, state, and local laws,
- California organic poultry producers may only use materials allowed for organic production, per [7 Code of Federal Regulations \(CFR\) §205.605\(a\) and \(b\)](#), and
- Any materials planned for use must be listed on their Organic Systems Plan and approved by their USDA Accredited Certifying Agent for their intended use.

## Approved California HPAI Disinfectants List

Active Ingredient(s)	Product Name	
Quaternary Ammonium	AseptiCare •	Maquat 256-NHQ ••••★
	Bardac 205M-10 ••••	Maquat 32-NHQ ••••★
	Bardac 205M-23 ••••	Maquat 32 PD ••••★
	Bardac 205M-5.2 ••••	Maquat 32 ••••
	BTC 885 NDC-128 ••••	Maquat 5.5-M ••••★
	BTC 885 Neutral Disinfectant	Maquat 50DS ••••
	Cleaner-256 ••••	Maquat 512-NHQ ••••
	Carb ••••	Maquat 615-HD ••••★
	D7 part 1 ••••	Maquat 64-NHQ ••••★
	Formulation HS-1210 Disinfectant/ Sanitizer (3.85%) ••••	Maquat 64 ••••
	Formulation HS-1210 Disinfectant/ Sanitizer (50%) ••••	Maquat 7.5-M ••••★
	Formulation HWS-256 ••••	Maquat 705-M ••••★
	Formulation HWS-32 ••••	Maquat 710-HF ••••
	HS-267Q ••••	Maquat 710-M ••••★
	Lonza Formulation DC-103 ••••	Maquat 750-M ••••★
	Lonza Formulation R-82 ••••	Maquat 86-M ••••
	Lonza Formulation R82F ••••	Maquat MQ2525M-14 ••••
	Lonza Formulation S-18F ••••	NP 4.5 (D&F) Detergent/Disinfectant ••••
	Lonza Formulation S-21F ••••	NP 4.5 Detergent/Disinfectant ••••
	Lonza Formulation S-21 ••••	Opti-cide 3 ••••
	Lysol Brand All Purpose Cleaner ••••	SC-5:128N ••••
	Lysol Brand Disinfectant Direct	SC-5:256N ••••★
	Multi-Purpose Cleaner ••••	SC-5:64N ••••
	Maquat 10-PD ••••	SC-AHD-64 ••••
	Maquat 10 ••••	SC-NDC-128 ••••
	Maquat 128-NHQ ••••★	SC-NDC-64 ••••
	Maquat 128 MN ••••★	Stepan Disinfectant Wipe ••••
	Maquat 128 PD ••••	Sterilex Ultra Disinfectant Cleaner
	Maquat 128 ••••	Solution 1 ••••★
	Maquat 20-M ••••	Sterilex Ultra Powder ••••
	Maquat 2420-10% ••••	Sting ••••
	Maquat 2420-Citrus ••••	Synergize ••••★
		Vital Oxide ••••★

**Approved CA Use Sites:** • Animal Housing | • Veterinary | • Farms | • Residential

★ Can be applied by fogging

**To be effective, disinfectants must be used according to the label.**

*\*Disclaimer: Trade names used in this publication do not constitute a guarantee, warranty, or endorsement of the products, nor criticize similar products not mentioned. California Department of Food and Agriculture (CDFA) bears no responsibility for liability resulting from the use of these products. These procedures are not guaranteed to prevent highly contagious diseases from affecting your birds; however, they will reduce risks. The HPAI disinfectants listed are approved for Animal Housing, Farms and Veterinary sites only.*

## Approved California HPAI Disinfectants List

Active Ingredient(s)	Product Name	
Hydrogen Peroxide	Accel (Concentrate) Disinfectant Cleaner ●●● Accel TB Wipes ●●● Accel TB ●●●● Blondie ●●●● D7 part 2 ●●●● Dagwood ●●●● Maguard 1522 ●● Maguard 5626 ●●●★ Octave FS ●●● Oxivir TB ●●● Oxonia Active ●●●★	Oxy-1 RTU ●●●● Oxy-1 Wipes ●●●● Oxy-Res (Concentrate) ●●● Peridox RTU ●●● Peridox ●●● Proxitane AHC ●●●●★ Sanidate 5.0 ●●●●★ Sterilex Ultra Disinfectant Cleaner Solution 1 ●●●★ Virasept ●● Vortexx ●●●
Peroxyacetic Acid (Peracetic Acid)	Maguard 1522 ●● Maguard 5626 ●●●★ Octave FS ●●● Oxonia Active ●●●★ Peridox ●●●	Peridox RTU ●●● Proxitane AHC ●●●●★ Sanidate 5.0 ●●●●★ Virasept ●● Vortexx ●●●
Phosphoric Acid	Maquat 10 ●●●●	
Caprylic Acid	Octave FS ●●● Virasept ●● Vortexx ●●●	
Sodium Chlorite	Exspor Base Concentrate ●●● PerformAcide ●●●	
Sodium Hypochlorite	2% Sodium Hypochlorite Spray ●●●● Buster ●●●● CPPC Storm ●●●● CPPC Tsunami ●●●● CSP-3002-3 ●●●	GNR ●●●● KIK 2.75% Scented Sodium Hypochlorite Bleach ●●●● Pure Bright Germicidal Ultra Bleach ●●●●
Sodium Percarbonate	FortiGuard ●●● Sterilex Ultra Powder ●●●●	
Iodine	Dyne-O-Might ●●	
Glutaraldehyde	Synergize ●●●★ Virocid (Virocide) ●●	
Isopropyl Alcohol	Opti-cide 3 ●●●●	
Chlorine Dioxide	ProOxine ●●★ Vital Oxide ●●●●★	
Phenol	Sporicidin Brand Disinfectant Towelettes ●●●●	
Sodium Phenate	Sporicidin Brand Disinfectant Towelettes ●●●●	

**Approved CA Use Sites:** ● Animal Housing | ● Veterinary | ● Farms | ● Residential

★ Can be applied by fogging

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## Approved California HPAI Disinfectants List

Active Ingredient(s)	Product Name
Sodium Chloride	Virkon S ●●●
Potassium Peroxymonosulfate	Virkon S ●●●
Citric Acid	<div> <div> CloroxPro Clorox Total 360 Disinfectant Cleaner Citric Acid Formula ●●● </div> <div> Contec Professional Citric Acid Multi-Surface Disinfectant Wipes ●●● </div> </div> <div> <div> Contec Citric Acid Disinfectant ●●● </div> <div> Contec Professional Citric Acid No-Rinse Sanitizer ●●● </div> </div> <div> <div> Contec Professional Citric Acid Multi-Surface Disinfectant ●●● </div> <div> SDC3A ●●● </div> </div>
Ethanol	<div> AseptiCare ● </div> <div> Carb ●●●● </div>
Silver Ion	SDC3A ●●●
Thymol	Benefect Botanical Daily Cleaner Disinfectant Spray ●●●●
Ammonium Chloride	<div> FortiGuard ●●● </div> <div> Virocid (Virocide) ●● </div> <div> PI Quat 20 ●●●●★ </div>

**Approved CA Use Sites:** ● Animal Housing | ● Veterinary | ● Farms | ● Residential

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