

2016 Disinfectants for Potato Handling and Storage Equipment

Type	Active ingredient	Products	Comments
Chlorine generating products			
Note: Chlorine has significant human inhalation problems-follow safety precautions!			
Bleach	Sodium hypochlorite	Many products available. Rate will depend on product. Concentrations will vary from 3.25- 12%	Strong oxidizer (corrosive), rapidly inactivated by soil or organic matter, no residual activity. Water pH must be 4-8.
Calcium hypochlorite	Calcium hypochlorite	Many products available. Rate will depend on product label.	Strong oxidizer (corrosive), rapidly inactivated by soil or organic matter, no residual activity. Water pH must be 4-8. Can be applied directly to potatoes.
Chlorine dioxide	Chlorine dioxide	Oxine Sanitizer, SNIper, EnviroCON, Clorodisys, CDG Solution 3000, and Purogene	Less corrosive than bleach, no residual activity, water pH not as critical.
Non-chlorine generating products			
Quaternary Ammonium products	Quaternary Ammonium, benzalkonium chloride, n-alkyl dimethyl benzyl ammonium chloride, N,N,-didecyl-N,N-dimethyl ammonium chloride, etc.	De-Bae, Virex, Roccal-D, AFBC, Breakthru, Micro Q64, Micro Q128, Pro-San, and many others.	Only slightly corrosive, relatively safe for humans when diluted, some residual activity, much less affected by organic matter or soil. Water pH not critical.
Hydrogen peroxide/ Peroxyacetic acid products	Hydrogen dioxide (hydrogen peroxide)	StorOx, Oxidate, Jet Oxide, Jet Ag, SaniDate 12.0	Can be applied directly to potatoes, no residual. Low corrosiveness. With use of heat JetAg can be used as fumigant in air system.
Iodine, Iodophores	Iodine, povidone iodine	Code Blue Iodine disinfectant and many others. Look for iodine in label name	Corrosive, will stain treated areas, some residual activity. Less affected by organic matter or water pH than bleach.
Phenol-glutaraldehyde	Phenol- glutaraldehyde	Sporocidin, Hospiseptic Disinfectant Wex-cide, Birex, etc- look for Phenol in name	Warning: oral poison!
Formaldehyde	Formaldehyde	Many products available.	Potential human carcinogen! Follow OSHA directions regarding exposure
Copper quinolinolate	Copper 8 quinolinolate	Many products available. Purchase as generic chemical. ISK Biotech PQ-57, PQ-80	Good residual activity. May cause some staining.
<p>The first step in disinfecting surfaces contaminated with potato residues and potential pathogens is to remove soil and potato residues by washing with soapy water and scrubbing to remove heavy deposits of potato residue. This is an important step since many disinfectants are inactivated by soil or organic matter and bacteria can live in the heavier residues and are protected from disinfectants. The second step is to disinfect with a labeled disinfectant. It is important to keep all surfaces wet with the disinfectant solution for 10-15 minutes and to use the highest labeled rate of the disinfectant chemical.</p>			