

Sanitizers Approved for Wash or Process Water

These sanitizing agents have been labeled by the U.S. EPA for use in wash or process water for fruit and vegetables. Individuals must check with their respective states to determine if the product has been approved for use in that state. Author: Amanda Deering, Department of Food Science, Purdue University, adeering@purdue.edu

Product Name	Active Ingredient	Company	EPA Reg. No.
Agclor®	sodium hypochlorite	Decco	2792-62
Anthium Dioxide®	chlorine dioxide	International Dioxide	9150-2
Antimicrobial Fruit and Vegetable Treatment®	lactic acid	Ecolab	1677-234
Biosafe Disease Control RTU®	hydrogen peroxide	Biosafe Systems	70299-9
Biosafe Fruit & Vegetable Wash®	hydrogen peroxide	Biosafe Systems	70299-9
BioSide HS-15%®	peroxyacetic acid	Enviro Tech	63838-2
Biotrol 150®	peroxyacetic acid	U S Water Services	63838-2-71675
Bromide Plus®	sodium bromide	Clearon	8622-49-69470
Bulab 6040®	sodium bromide	Buckman Laboratories	1448-345
Busan 1167®	sodium bromide	Buckman Laboratories	1448-345
Carnebon 200®	chlorine dioxide	International Dioxide	9150-3
Chlor San 1050®	sodium hypochlorite	Chemstation Of Northern Indiana	67649-20001-74373
Chlor-Clean 12.5®	sodium hypochlorite	Madison Chemical	550-198-110
Chlorine Liquefied Gas Under Pressure®	chlorine	Olin Chlor Alkali Products	72315-1
Clearitas 450®	sodium hypochlorite	Blue Earth Labs	87437-1
DicaSan PAA®	peroxyacetic acid	Dubois Chemicals	63838-1-3635
Enviroguard Sanitizer®	peroxyacetic acid	Rochester Midland	63838-1-527
Formula 308®	sodium hypochlorite	Garratt Callahan	33981-20002-8540
Hydroxysan PA No. 480®	peroxyacetic acid	Hydrite Chemical	63838-1-2686
Induchlor 70®	calcium hypochlorite	PPG Industries	748-296
K-Brom 40®	sodium bromide	Water Science Technologies	88714-3
KC-610®	peroxyacetic acid	Packers Chemical	63838-1-63679
Madison Oxy-San Acid Sanitizer Disinfectant®	peroxyacetic acid	Madison Chemical	63838-13-110
Oakite Liquid Bactericide®	sodium hypochlorite	Chemetall	9359-2-1020
Oxine®	chlorine dioxide	Bio-Cide	9804-1
Oxywave®	peroxyacetic acid	Madison Chemical	63838-1-110
Peraclean 15®	peroxyacetic acid	Evonik	54289-4
Peraclean 5®	peroxyacetic acid	Evonik	54289-3
Perasan A®	peroxyacetic acid	Enviro Tech	63838-1
Peroxy-Serve 5®	peroxyacetic acid	Zep	63838-1-1270
Premium Peroxide II®	peroxyacetic acid	West Agro	63838-1-4959
SaniDate 12.0®	peroxyacetic acid	Biosafe Systems	70299-8
Sno-Glo Bleach®	sodium hypochlorite	Brenntag Mid-South	6785-20002
Sobr2®	sodium bromide	Buckman Laboratories	1448-345
Sodium Hypochlorite-12.5 Bacticide®	sodium hypochlorite	Olin Chlor Alkali Products	72315-6
Sodium Hypochlorite 12.5%®	sodium hypochlorite	Alexander Chemical	7151-20001
Sodium Hypochlorite Solution 12.5%®	sodium hypochlorite	KA Steel Chemicals	33981-20001
Sysco Classic Germicidal Ultra Bleach®	sodium hypochlorite	Sysco	70271-13-29055
Tsunami 100®	peroxyacetic acid	Ecolab	1677-164
Vertex Concentrate®	sodium hypochlorite	Vertex Chemical	9616-8
Vertex CSS-10®	sodium hypochlorite	Vertex Chemical	9616-8
Vertex CSS-12®	sodium hypochlorite	Vertex Chemical	9616-7
Vertex CSS-5®	sodium hypochlorite	Vertex Chemical	9616-10
VigorOx 15 F&V®	peroxyacetic acid	FMC	65402-3
VigorOx SP-15 Antimicrobial Agen®	peroxyacetic acid	FMC	65402-3
WSU Sodium Hypochlorite 12.5%®	sodium hypochlorite	Water Solutions Unlimited	33981-20001-83327
Zep Fruit & Vegetable Wash®	peroxyacetic acid	Zep	63838-1-1270



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Pests are living organisms that occur where they are not wanted or that cause damage to crops, humans or other animals. Examples include: insects, mice and other animals, unwanted plants (weeds), fungi, microorganisms such as bacteria and viruses.

A pesticide is any substance or mixture of substances intended for: preventing, destroying, repelling or mitigating any pest. Pesticides are often misunderstood to refer to insecticides, but also refer to any herbicides, fungicides, and post-harvest sanitizers used to control pests.

Post-harvest sanitizing is performed at the farm packing facilities to decrease bacteria, yeasts, and molds that may cause spoilage and reduce shelf-life of a product. They also kill pathogenic bacteria that can cause disease to humans. All sanitizers must have an EPA registration number on the label and this means the product should perform as stated on the label and not pose unreasonable hazards to your health **IF** used according to the label on the instructions. This is why it is important to always use sanitizers according to their label instructions.

The label should tell you:

- Concentration for use and how to dilute it
- Contact time
- Possibly what types of organisms the product can kill (*Listeria monocytogenes*, spoilage organisms, etc.)
- If a final rinse of the produce with potable water is needed following contact with the sanitizer
- Disposal of product and containers
- First aid procedures

Once a sanitizer is registered with the EPA it must also be registered in the state that it is used. In Indiana, the product is registered through the Office of the Indiana State Chemist (OISC) and has to be renewed each year. Product registration data is maintained on the National Pesticide Information Retrieval System (NPIRS) and can be accessed to determine if a sanitizer is registered in Indiana at:

http://npirspublic.ceris.purdue.edu/state/state_menu.aspx?state=IN

For more information contact: Amanda Deering, Department of Food Science, Purdue University, (adeering@purdue.edu, 765-494-0512) or Ed White, (ewhite@purdue.edu, 765-494-1587) with OISC if you have questions or need help choosing the right sanitizer to use in your facility.

More information about GAPs and Sanitizers is available in:

- Sanitation in Produce Packing Sheds: www.in.gov/isdh/files/ISDH_Produce_Packing_Shed_Sanitation_Fact_Sheet%281%29.pdf
- Food Safety for Fruit and Vegetable Farms, <https://ag.purdue.edu/hla/foodsafety/Pages/default.aspx>
- U.S. FDA, www.fda.gov/food/guidanceregulation/%20fsma/ucm253380.htm
- Basic Elements of Equipment Cleaning and Sanitizing <http://edis.ifas.ufl.edu/fs077>