



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Antimicrobials Division (7510P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

12446-20015

Date of Issuance:

9/11/25

NOTICE OF PESTICIDE:

☒ Registration
☐ Reregistration
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

SAN-I-OX

Name and Address of Registrant (include ZIP Code):

Crystal Maira for
ZECO LLC
3401 Cummings Rd, Chattanooga TN, 37419
Electronic Transmittal: crystal.maira@vincitgroup.com

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Antimicrobials Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(C). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Steven Snyderman, Product Manager 33
Regulatory Management Branch II
Antimicrobials Division (7510M)
Office of Pesticide Programs

Date:

9/11/25

2. You are required to comply with the data requirements described in the DCI Order identified below:
 - a. Hydrogen Peroxide: GDCI-000595-1127
 - b. Peracetic Acid: GDCI-063201-1125

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI Order listed above, you may contact the Reevaluation Team Leader (Team 36): <https://www.epa.gov/pesticide-contacts/contacts-office-pesticide-programs-antimicrobials-division>

3. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, “EPA Reg. No. 12446-20015.”
4. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. See FIFRA section 2(p)(2). If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process, FIFRA section 12(a)(1)(B). Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Assurance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated, 8/25/25
- Alternate CSF 1 dated, 8/25/25

Additionally, the following Alternate Brand Names (ABNs) have been added to the record:

- SAN-I-OX PLUS
- SAN-I-OX II

If you have any questions, please contact Linda Amar via email at amar.linda@epa.gov.

Enclosure: Final Stamped Label

{Note to Reviewer: [Bracketed text] is optional.}

SAN-I-OX II

SAN-I-OX II is a peracetic acid-based sanitizer/disinfectant developed for the following uses:

Institutional/Industrial Sanitizer and Disinfectant for Previously Cleaned Hard Non-Porous Food Contact Surfaces in: [Dairies,] [Dairy Processing Facilities,] [Wineries,] [Breweries,] [Food and Beverage Plants,] [Poultry and Egg Facilities,] and [Animal Housing].
Hard, Non-Porous Surface Disinfection in: [Hospitals,] [Schools,] [Industrial Facilities,] [Office Buildings,] [Veterinary Clinics].
Bacteria, Slime, Odor and Algae Control in: [Recirculating Cooling Water and Evaporative Coolers,] [Reverse Osmosis,] [Nano and Ultra Filtration,] [and] [Agricultural Waters].

Active Ingredient:

Hydrogen Peroxide.....26.6%

Peracetic Acid.....5.0%

Inert Ingredients.....68.4%

Total.....100.0%

ACCEPTED

09/11/2025

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 12446-20015

Before Using This Product, Please Read This Entire Label Carefully

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

KEEP OUT OF REACH OF CHILDREN DANGER – PELIGRO

{Note to Reviewer: In accordance with 40 CFR 156.68(d), all first aid statements, as prescribed, will appear on the front panel of the product label.}

FIRST AID	
If in Eyes	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15 – 20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
If on Skin	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15 – 20 minutes.• Call a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
If Inhaled	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible.• Call a poison control center or doctor immediately for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. For general information on product use, etc., call the National Pesticides Information Center at 1-800-858-7378. For emergencies, call the poison control center 1-800-222-1222.	

{Note to Reviewer: [Bracketed text] is optional.}

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

[See [left] [back] [side] panel [of label] for additional precautionary statements.]

Manufactured For/By:

ZECO, LLC

3401 Cummings Road

Chattanooga, TN 37419

EPA Reg. No.: 12446-ENNRL

EPA Est No.:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER CORROSIVE: Causes irreversible eye damage and skin burns. Harmful if absorbed through the skin. Harmful if swallowed. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Wear overalls worn over long-sleeved shirt and long pants, socks, chemical-resistant footwear, and gloves. Wear protective eyewear (goggles, face shield, or safety glasses). Remove contaminated clothing and wash before reuse.

PHYSICAL OR CHEMICAL HAZARDS:

STRONG OXIDIZING AGENT. CORROSIVE: Mix only with potable water below 140° F. Product must be diluted in accordance with label directions prior to use. This product is not combustible; however, at temperatures exceeding 156°F, decomposition occurs releasing oxygen. The oxygen released could initiate combustion.

PERSONAL PROTECTIVE EQUIPMENT

Handlers who may be exposed to the undiluted product through mixing, loading, application, or other tasks must wear: coveralls over long-sleeved shirt and long pants, rubber gloves, chemical resistant footwear plus socks, and protective eyewear (goggles or face shield).

Handlers who may be exposed to the diluted product through application or other tasks must wear: long-sleeved shirt and long pants, and shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

[For containers greater than 5 gallons:]

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds, fish and aquatic organisms. Caution must be used when applying indoors because pets may be at risk. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage

{Note to Reviewer: [Bracketed text] is optional.}

treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA. Not harmful to septic tanks.

[For containers less than or equal to 5 gallons:]

ENVIRONMENTAL HAZARDS

This product is toxic to birds, fish, and aquatic invertebrates.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE) and Restricted-Entry Interval (REI). The requirements in this box only apply to the uses of this product that are covered by the Workers Protection Standard. There is a restricted entry of zero (0) hours for this product.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep unprotected persons out of treated areas until sprays have dried.

[Optional Label Claims:]

This product is efficacious against the following organisms:

Bacteria

Campylobacter jejuni [(ATCC 29428)]
Enterobacter aerogenes [(ATCC 13048)]
Escherichia coli [(ATCC 11229)]
Escherichia coli O157:H7 [(ATCC 35150)]
Lactobacillus malefermentans [(ATCC 49373)]
Listeria monocytogenes [(ATCC 19117)]
Pseudomonas aeruginosa [(ATCC 15442)]
Salmonella enterica [(ATCC 10708)]
Salmonella enterica [(ATCC 13311)]
Staphylococcus aureus [(ATCC 6538)]

Viruses[†]

Porcine Epidemic Diarrhea Virus [from NVSL] [Strain Colorado 2013 Isolate]
Avian Influenza A (H5N1) Virus [CDC #2006719965] [Strain: VNH51-PR8/CDC-RG]

{Note to Reviewer: [Bracketed text] is optional.}

Pre-Treatment Prior to Sanitization of Food-Contact Surfaces

This product can be used as a pre-treatment on food contact prior to sanitization. For use dilute 3.4 – 6.9 fl oz of this product in 5 gallons of water, this will provide 300 – 600ppm peracetic acid. Let soak for 15 minutes and follow with a potable water rinse.

SANITIZATION

This product is a hydrogen peroxide and peracetic acid sanitizer for use on pre-cleaned surfaces such as equipment, [pipelines,] [tanks,] [vats,] [filters,] [evaporators,] [pasteurizers,] [utensils,] [and] [aseptic equipment] in [dairies,] [breweries,] [wineries,] beverage and food processing/packaging plants, including dairy processing plants, egg processing/packaging equipment surfaces, and eating establishments. SAN-I-OX II is effective as a sanitizer when solution is prepared in water of up to 300 hardness as CaCO₃. This product has demonstrated greater than 99.999% reduction of *Staphylococcus aureus* [(ATCC 6538)], *Escherichia coli* [(ATCC 11229)], *Salmonella enterica* [(ATCC 13311)], *Pseudomonas aeruginosa* [(ATCC 15442)], *E. coli* O157: H7 [(ATCC 35150)], *Lactobacillus malefermentans* [(ATCC 49373)], *Campylobacter jejuni* [(ATCC 29428)] and *Listeria monocytogenes* [(ATCC 19117)] in the AOAC Germicidal and Detergent Sanitizing Action of Disinfectant study.

NOTES:

FOR MECHANICAL OPERATIONS: prepared use solution may not be reused for sanitizing but may be reused for other purposes such as cleaning.

FOR MANUAL OPERATIONS: Fresh sanitizing solutions must be prepared daily or more often if the solution becomes diluted or soiled.

COMPATIBILITY: This product in its use concentration is compatible with stainless steel, rubber, and plastic surfaces. If product is intended to be used on any other surface, it is required that you apply product to a smaller test area to determine compatibility before proceeding with its use.

SANITIZING FOOD CONTACT SURFACES:

This product may be used in Meat, Poultry, Dairy, Egg, Beverage, [including beer fermentation,] and Sea Food processing and packaging facilities[, as well as dairy farms] as a sanitizer. Prior to sanitizing, remove food particles, then wash with a detergent solution, followed by a potable water rinse. Sanitize with concentration of 1.2 – 6.9 fl oz this product diluted in 6 gallons of water (0.15% -0.89% v/v concentration, or 89- 500 ppm active peracetic acid). At this dilution this product is effective against *Staphylococcus aureus*, *Escherichia coli*, *Salmonella enterica*, *Pseudomonas aeruginosa*, *E. coli* O157:H7, *Campylobacter jejuni*, and *Listeria monocytogenes*.

Use immersion, coarse spray, or circulation techniques as appropriate to the equipment. All surfaces should be exposed to sanitizing solution for a period of at least 60 seconds or more if specified by a governing code. Drain excess solution. Do not rinse.

SANITIZING FOOD CONTACT SURFACES (*Lactobacillus malefermentans*):

This product may be used in Meat, Poultry, Dairy, Egg, Beverage, [including beer fermentation,] and Sea Food processing and packaging facilities[, as well as dairy farms] as a sanitizer. Prior to sanitizing, remove food particles, then wash with a detergent solution, followed by a potable water rinse. Sanitize with concentration of 1.6 – 6.9 fl oz this product diluted in 6 gallons of water (0.2% -0.89% v/v concentration, or 119 - 500 ppm active peracetic acid). At this dilution this product is effective against *Lactobacillus malefermentans*.

Use immersion, coarse spray or circulation techniques as appropriate to the equipment. All surfaces should be exposed to sanitizing solution for a period of at least 60 seconds or more if specified by a governing code. Drain excess solution. Do not rinse.

{Note to Reviewer: [Bracketed text] is optional.}

SANITIZATION OF CONVEYORS, PEELERS, SLICERS, SAWS, AND OTHER EQUIPMENT FOR MEAT, POULTRY, SEAFOOD, FRUIT, NUTS AND VEGETABLES:

For use in the static or continuous washing, rinsing and sanitizing of conveyor equipment, peelers, slicers, saws, etc. This product is effective against the gram-negative and gram-positive organisms *Staphylococcus aureus*, *Escherichia coli*, *Salmonella enterica*, *Pseudomonas aeruginosa*, *E. coli* O157:H7, *Campylobacter jejuni*, and *Listeria monocytogenes*.

For use in the static or continuous sanitizing, washing or rinsing of conveyors, slices, saws, and equipment, apply a solution of this product using of 1.2 – 6.9 fl oz this product diluted in 6 gallons of water (0.15% -0.89% v/v concentration, or 89- 500 ppm active peracetic acid). Apply sanitizer solution using coarse spray or similar means of wetting or soaking surfaces, so as to affect draining and prevent puddling. Allow sanitizer to thoroughly wet surface for a minimum of 60 seconds contact time. No rinse is needed.

SANITIZATION OF CONVEYORS, PEELERS, SLICERS, SAWS, AND OTHER EQUIPMENT FOR MEAT, POULTRY, SEAFOOD, FRUIT, NUTS AND VEGETABLES (*Lactobacillus malefermentans*):

For use in the static or continuous washing, rinsing and sanitizing of conveyor equipment, peelers, slicers, saws, etc. This product is effective against the gram-positive organism *Lactobacillus malefermentans*.

For use in the static or continuous sanitizing, washing or rinsing of conveyors, slices, saws, and equipment, apply a solution of this product using of 1.6 – 6.9 fl oz this product diluted in 6 gallons of water (0.2% -0.89% v/v concentration, or 119 - 500 ppm active peracetic acid). Apply sanitizer solution using coarse spray or similar means of wetting or soaking surfaces, so as to affect draining and prevent puddling. Allow sanitizer to thoroughly wet surface for a minimum of 60 seconds contact time. No rinse is needed.

SANITIZING OF CASING OR SHELL EGGS:

To sanitize clean shell eggs intended for food or food products, spray with a solution of this product by diluting 1.2 – 1.9 fl oz product with 6 gallons of potable water (providing 89-139 ppm peracetic acid). The solution must be equal to or warmer than the eggs, but not to exceed 130°F. Wet eggs thoroughly and allow to drain. Allow surface to remain wet for 60 seconds. Eggs that have been sanitized with this product may be broken for use in the manufacture of egg products without a prior potable water rinse. The sanitizing solution must not be reused for sanitizing eggs.

SANITIZING EATING, DRINKING AND FOOD PREP UTENSILS:

Remove food particles by a prescrape, a preflush, and, when necessary, a presoak treatment. Wash with a recommended detergent. Rinse with clean water. Sanitize using a solution of 1.2 - 2.4 fl oz per 6 gallons of water (89- 180 ppm active peracetic acid). Immerse all utensils for at least 60 seconds or more if specified by a governing sanitary code. Drain excess solution.

SANITIZING TABLEWARE:

For sanitizing tableware in low temperature ware-washing machines, inject this product into the final rinse water at a concentration of 1.2 – 2.4 fl oz of this product diluted in 6 gallons of water. Allow contact time of at least 60 seconds. Air dry. To ensure that this sanitizer concentration does not fall below 0.1%, periodically test the rinse solution with a suitable test kit and adjust the dispensing rate accordingly. Consult your technical service representative for assistance and further information on sanitizing tableware in ware-washing machines.

{Note to Reviewer: [Bracketed text] is optional.}

FINAL SANITIZING BOTTLE RINSE:

This product may be used as a final sanitizer rinse, followed by adequate draining, for returnable and non-returnable bottles at a 0.15% - 0.89% dilution (1.1– 6.9 fl oz of this product in 6 gallons of water), which yields 82 – 500 ppm active peracetic acid. Allow sanitizer to contact surface for at least 60 seconds. A post rinse is not required.

ANTIMICROBIAL RINSE OF PRECLEANED OR NEW RETURNABLE OR NON-RETURNABLE CONTAINERS:

To reduce the number of beverage spoilage organisms, use a 1.8% - 3.6% v/v solution (2.3 – 4.6 fl oz of this product in 6 gallons of water), which equals 1000 – 2000 ppm peracetic acid, at a temperature range of 40 – 60°C for a minimum of 15 seconds. After adequate draining, rinse interior container surfaces with potable water.

FOAM SANITIZING OF NON-FOOD CONTACT SURFACES

As an adjunct to sanitizing procedures this product may be added to an appropriate foam additive and foamed on environmental or equipment surfaces using conventional foam-generating equipment. The resulting foam blend can be used on equipment, floors, walls, ceilings, drains, etc. and must be left on surface for a minimum of 5 minutes or longer. Do not allow foam to dry onto the surface. Contact your Zee Company representative for information on PERAFOAM and foamer apparatus.

Foam Sanitizing of Non-Food Contact Surfaces:

Remove contamination with a cleaner or other suitable detergent and rinse with potable water. Manually or mechanically blend 2.2 – 23.3 fl oz of this product and 4 – 24 fl oz of PERAFOAM (foam additive) per 6 gallons of water (0.3% - 3.0% v/v concentration, or 163- 1700 ppm active peracetic acid). At this concentration, the product is effective against *Staphylococcus aureus* (ATCC 6538) and *Enterobacter aerogenes* (ATCC 13048). Follow label instructions of approved foaming additives for mixing directions.

ENTRYWAY SANITIZING SYSTEMS:

To help prevent cross-contamination in plant, apply (spray) a sanitizing foam to the entryway. The foam must cover the entire path of the doorway. For effective coverage of footwear and forklift tires, etc. apply a foam layer 0.5-2 inches in depth. Set the system to deliver 2.2 – 23.3 fl oz (163- 1700 ppm active PAA) of this product and 4-12 fl oz of PERAFOAM (foam additive) per 6 gallons of water. Adjust the PAA concentration by testing the collapsed foam solution using a peracetic acid test kit.

PACKING HOUSE SANITIZATION: [(Not Registered for Use in California)]:

This product is an effective sanitizer against *Staphylococcus aureus*, *Escherichia coli* and *Salmonella enterica*. Remove contamination with a cleaner or other suitable detergent and rinse with potable water. Use this product at 1.1 – 3.4 fl oz per 3 gallons of water (163– 500ppm active peracetic acid) as a general sanitizing coarse spray to reduce bacteria and fungi contamination of walls, floors, conveyors and harvesting containers. Allow sanitizer to contact surface for at least 60 seconds. Allow to air dry. Do not rinse.

FIELD EQUIPMENT SANITIZATION: [(Not Registered for Use in California)]:

This product is used to sanitize harvest equipment such as pickers, trailers, trucks (including truck body parts and tires), bins, packing carts, ladders, power tools, gloves, rubber boots, pruning shears or other hard non-porous equipment that may transfer *Staphylococcus aureus*, *Escherichia coli* and *Salmonella enterica*. Before sanitization, move the field equipment in an area with an impervious surface and with controlled drainage. Remove contamination with a cleaner or other suitable detergent and rinse with potable water. Use this product at a dilution

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of 1.1 – 3.4 fl oz per 3 gallons of water (163– 500 ppm active peracetic acid) as a general sanitizing coarse spray. Allow sanitizer to contact surface for at least 60 seconds. Allow to air dry. Do not rinse.

[FOR USE IN DAIRIES]

[FLUSHING MILKING CLAW UNITS:

For use through claws and liners between milking each cow. On pre-cleaned hard non-porous surfaces, this product at a concentration of 1.2 – 6.9 fl oz diluted in 6 gallons of water (0.15% -0.89% v/v concentration, or 89-500 ppm active peracetic acid), is effective against *Staphylococcus aureus*, *Escherichia coli*, *Salmonella enterica*, *Pseudomonas aeruginosa*, *Campylobacter jejuni* and *Listeria monocytogenes*.

1. Pre-rinse claws and liners with potable water. Remove soil by a pre-flush or pre-scrape and when necessary, pre-soak treatment.
2. Clean milking claws and liners with a suitable detergent.
3. Sanitize milking claws and liners prior to use and/or between milking each cow with a solution of 1.2 – 6.9 fl oz of this product diluted in 6 gallons of water to provide 89- 500 ppm of peracetic acid. Be sure the solution is in contact with food contact surfaces for at least 60 seconds. Adequately drain units. Do not post rinse.]

AGRICULTURAL OR HORTICULTURAL USES:

There is a Restricted-Entry-Interval of zero (0) hours after the use of this product. This product should never be mixed or combined with any other pesticide or fertilizer. Upon soil contact this product decomposes rapidly to oxygen and water. This product may be harmful to fish if exposed on a continuous basis at concentrations of 0.5 ppm or more of active peracetic acid. Meter this product into pressurized pipes using a plastic or stainless steel injection/backflow device installed far enough upstream from the target equipment to ensure thorough mixing. For open flowing bodies of water, apply this product as far upstream as possible to allow adequate mixing prior to the flow entering any larger body of water. If open pouring of this product is required pour product as close to the surface of the water as possible to reduce odor exposure.

Drip Irrigation System Cleaning [(Not Registered for Use in California)]:

To clean slime and algae from drip system tapes and emitters, meter this product upstream from pumps or filters at the rate of 1.1 – 2.3 fl oz per 50 gallons of water (10 - 20 ppm peracetic acid). When required, during normal irrigation cycles, use this product at the recommendation dose for a minimum of 30 minutes. Thereafter, the irrigation cycle should be discontinued and the line should not be flushed.

NOTE: This product is highly acidic. Do not use with or around chlorinated products. This product at its use dilution is compatible with stainless steel, rubber and plastic surfaces. If product is intended to be used on any other surface, it is recommended that you apply product to a smaller test area to determine before proceeding with its use.

To determine concentration of dilution refer to an appropriate Peracetic Acid Test Kit. Consult your Zee Company representative for use and set up instructions.

SANITIZING NON FOOD CONTACT NON-POROUS SURFACES

This product may be used in Meat, Poultry, Dairy, Egg, Beverage, including beer fermentation, and Sea Food processing and packaging facilities[, as well as dairy farms] as a sanitizer. Prior to sanitizing, remove food particles, then wash with a detergent solution, followed by a potable water rinse. Sanitize with concentration of 2.2 – 13.7 fl oz this product diluted in 6 gallons of water (0.3% -1.8% v/v concentration, or 163- 1000 ppm active peracetic acid). At this dilution this product is effective against *Staphylococcus aureus*, *Enterobacter aerogenes*, *Escherichia*

{Note to Reviewer: [Bracketed text] is optional.}

coli O157:H7, *Salmonella enterica* [(ATCC 10708)], *Pseudomonas aeruginosa*, and *Listeria monocytogenes*.

Use immersion, coarse spray or circulation techniques as appropriate to the equipment. All non-porous surfaces should be exposed to sanitizing solution for a period of at least 5 minutes or more if specified by a governing code. Drain excess solution. Do not rinse.

REVERSE OSMOSIS (RO), ULTRA FILTRATION (UF), NANO FILTRATION (NF), AND OTHER MEMBRANE CLEANING-SANITIZING, AND ASSOCIATED PIPING SYSTEMS [(Not Registered for Use in California)]:

This product may be used in the sanitization of ultra-filtration (UF), nano filtration (NF) and reverse osmosis (RO) membranes and other similar type membranes and their associated piping systems. This product may be added continuously in food, beverage, and drinking water systems for RO (reverse osmosis) systems only and in accordance with the instructions below. Prior to using this product, consult with the membrane manufacturer to confirm compatibility of membranes with this peracetic acid solutions.

Batch Sanitation of NF, UF and RO Systems [(Not Registered for Use in California)]: Isolate incompatible equipment, such as carbon filters and ion exchangers. Turn off power of ultraviolet light units. Clean system with an appropriate cleaner and follow with RO permeate water or potable water rinse. Remove mineral deposits if necessary with an acidic cleaner, and rinse as before. Fill entire system with water and add up to 2.2 fl oz per 5 gallons of water (195 ppm active peracetic acid) for heavily fouled systems. The typical sanitation use solution dosing of this product is 0.9 – 2.2 fl oz per 5 gallons of water (80 - 195 ppm peracetic acid). Recirculate the sanitizing solution through the piping and membrane system with cold water for 10 minutes minimum, or up to 4 hours, depending on the severity of cleaning to be done. Open and close process valves and solenoids to be sure all parts are in contact with the solution. For occasional intermittent feed, do not exceed 195 ppm active peracetic acid, which equals 2.7 fl oz of this product per 6 gallons of feed water. Do not use the intermittent feed method for on-line use for potable water or direct food contact systems. Rinse the system with RO permeate or potable water, until residual hydrogen peroxide concentration is below 1 ppm.

RO Continuous or Intermittent Addition [(Not Registered for Use in California)]: For continuous addition methods for RO system, use 2- 5 ppm active peracetic acid which equals 2.1 – 5.1 fl oz of this product per 450 gallons of process water. For occasional intermittent feed, use 98 ppm – 195 ppm active peracetic acid, which equals 1.3 fl oz to 2.7 fl oz of this product per 6 gallons of feed water. Do not use the intermittent feed method for on-line use in potable water or direct food contact systems.

DISINFECTION

NON-FOOD CONTACT HARD SURFACE DISINFECTION

Combination Disinfection[†] and Cleaning:

This product can be used to disinfect floors, walls and other hard nonporous surfaces such as tables, chairs, countertops, bathroom fixtures, sinks, shelves, racks, carts, refrigerators, coolers, sealed tile, linoleum, vinyl, and glazed porcelain. Also use this product in veterinary clinics, industrial facilities, office buildings, recreational facilities, retail and wholesale establishments.

This product is effective against *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Salmonella enterica*, *Escherichia coli* O157:H7, Avian Influenza (H5N1) virus, *Listeria monocytogenes* and Porcine Epidemic Diarrhea (PED) virus at 0.2% - 3.0% v/v (124– 1700 ppm of peracetic acid), which is 1.4 – 19.4 fl oz per 5 gallon of water in hard water (400 ppm CaCO₃) and 5% organic soil loading on hard nonporous surfaces. For heavily soiled areas a pre-cleaning step is required, followed by a potable water rinse. Apply solution with a mop,

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cloth, sponge, brush, etc. or by soaking or immersion so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes, and then remove solution and entrapped soil with a clean wet mop, cloth, wet vacuum pickup, or by draining. Prepare a fresh solution daily or when it becomes soiled or diluted.

DISINFECTION OF ANIMAL HOUSING, POULTRY, SWINE AND [NON-DAIRY] CATTLE PREMISES, VEHICLES, COOPS, CRATES [AND] [CALF HUTCHES]

This product is designed for use in animal hospitals, animal laboratories, kennels, pet shops, zoos, pet animal quarters, poultry premises, poultry hatcheries, trucks and other transportation vehicles, and livestock quarters. When use as directed, this product is specifically designed to disinfect, deodorize, and clean inanimate, hard, non-porous surface such as walls, floors, sink tops, furniture, operating tables, kennel runs, cages and feeding equipment. In addition this product will deodorize those areas which are generally hard to keep smelling fresh, such as garbage storage areas, empty garbage bins and cans, and any other areas which are prone to odors caused by microorganisms.

Disinfection of Poultry Premises:

For heavily soiled areas, a pre-cleaning step is required. Prepare a fresh solution for each use. Remove all poultry and feeds from premises, trucks, coops and crates. Remove all litter and droppings from floors, walls and surfaces of facilities occupied or traversed by poultry. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all hard, non-porous surfaces with a detergent and rinse with water. Saturate hard, non-porous surfaces with a 0.38-1.25% v/v (2.5-8.0 fl oz per 5 gallons of water) solution of this product for a period of 10 minutes. Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains and waters with a detergent and rinse with potable water before reuse. Ventilate buildings, coops and other closed spaces. Do not house poultry or employ equipment until treated has been absorbed, set or dried. All treated equipment that will contact food, feed, or drinking water must be rinsed with potable water before reuse. See your technical representative for specific recommendations for all cleaning and rinsing requirements.

Disinfection and Deodorizing of Animal Housing Facilities (Barns, Kennels, Hutches, Hatcheries, Vehicles, Etc.):

For heavily soiled areas, a pre-cleaning step is required. Prepare a fresh solution for each use. Remove animals and feed from premises, vehicles, and enclosures. Remove litter, waste matter from floors, walls and non-porous surfaces of barns, pens, stalls, chutes and other facilities and fixtures occupied or traversed by animals. Empty all troughs, racks and other feeding and watering equipment. Clean all non-porous surfaces with soap or detergent and rinse with water. Saturate surfaces by applying a 0.2% - 3% v/v (124– 1700 ppm of peracetic acid), which is 1.4 fl oz – 19.4 fl oz per 5 gal of water solution of this product with a mop, brush or coarse spray. Wet all non-porous surfaces and allow to remain wet for 10 minutes. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals, as well as fork, shovels and scrapers used for removing litter and manure. Ventilate buildings and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed, set, or dried. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent, and rinse with potable water before reuse. See your Zee Company technical representative for cleaning recommendations.

Virucidal Activity†: Poultry, Pork, Cattle and Livestock Pathogens:

This product is an effective disinfectant against Avian Influenza (H5N1) virus and Porcine Epidemic Diarrhea (PED) virus at 0.2% - 3.0% v/v (124– 1700 ppm of peracetic acid), which is 1.4 – 19.4 fl oz per 5 gallons of water in hard water (400 ppm CaCO₃) and 5% organic soil loading on hard nonporous surfaces. For heavily soiled areas a pre-cleaning step is required, followed by a potable water rinse. Apply solution with a mop, cloth, sponge, brush, etc. or by soaking or immersion so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes,

{Note to Reviewer: [Bracketed text] is optional.}

and then remove solution and entrapped soil with a clean wet mop, cloth, wet vacuum pickup, or by draining. Prepare a fresh solution daily or when it becomes soiled or diluted.

CONTROL OF SLIME FORMING BACTERIA IN RECIRCULATING, COOLING WATER SYSTEMS AND HEAT TRANSFER SYSTEMS (COOLING TOWERS, EVAPORATIVE CONDENSERS, PASTEURIZERS, DAIRY SWEET OR COW WATER SYSTEMS, COOLING CANALS, TUNNEL COOLERS AND WARMERS, HYDROSTATIC STERILIZERS AND RETORTS, AND AIR WASHERS) [NOT FOR USE ON DAIRY FARMS] [(Not Registered for Use in California)]

Severely fouled systems should be cleaned before adding this product. This product must be added in the system directly and not mixed with any other chemicals or additives. Contaminations with other chemicals could result in product decomposition. Add this product at a point in the system where uniform mixing and even distribution will occur. Cooling water treated with this product following the dosage parameters indicated below, may be used as drinking water for farm animals such as hogs, cattle and poultry.

For slug or intermittent treatment [(Not Registered for Use in California)]: Add 10 - 60 fl oz of product per 1000 gallons of process water (equivalent to 4.5 – 26 ppm of peracetic acid). Repeat as necessary until microbiological control is evident. Thereafter, to maintain control, use 4.6 – 34.3 fl oz of this product per 1000 gallons of process water (2-15 ppm active peracetic acid) as a continuous or intermittent slug treatment. Daily dose varies according to severity of biofouling of the system.

Cleaning: To remove sessile bacteria from cooling systems it is necessary to clean slime and slime-forming bacteria from the surfaces of all areas of water contact. This can be accomplished by treating the recycled water with 114 – 343 fl oz of this product per 1000 gallons of water (50 – 150ppm active peracetic acid) for 4-8 hours during normal tower operating cycles. This procedure can be used for online or offline cleaning. When finished bleed down the system until the PAA level is <5-10 ppm. This treatment must be done at least once or twice each year depending on exposure conditions.

Air Washers [(Not Registered for Use in California)]: This product may be used to control bacteria and biofouling in industrial air washing/scrubbing systems. The air washer must have operational and effective mist elimination systems. Prior to use of this product, heavily fouled systems must be pre-cleaned using the appropriate cleaner. Continuous dosing methods will require 2- 7 ppm and intermittent dosing methods require 7-14 ppm as peracetic acid depending on the type of system and the level of microbiological control desired.

Evaporated or Condensed Water [(Not Registered for Use in California)]: This product may be used to treat SWEET or COW water (e.g. condensate of whey) collected from evaporated or condensing water systems in food or dairy plants [or farms]. Typically, the dosing regimen would be using intermittent or continuous methods at 2-15 ppm as peracetic acid. This product fulfills the criteria for Appendix F of the Grade “A” Pasteurized Milk Ordinance Recommendation of the U.S Public Health Service in water up to 300 ppm when tested by the AOAC Germicidal and Detergent Sanitizer Official Method.

FRUIT AND VEGETABLE WATER TREATMENT [(Not Registered for Use in California)]

This product may be used to help control spoilage or decay-causing bacteria and fungi in water or ice that contacts raw unprocessed fruits and vegetables outside of a food processing facility. The produce can be continuously sprayed or submerged using solution containing 3.7 – 5.5 fl oz of this product per 20 gallons of water (80 - 120ppm peracetic acid). Adjust dose as necessary to obtain satisfactory efficacy. Remove excess water or allow to drain. If using the submersion method, replace with a fresh solution as necessary, or when it becomes visibly soiled. A final potable water rinse is not necessary.

{Note to Reviewer: [Bracketed text] is optional.}

Sanitizing Hard, Non-Porous, Non-Edible outside Surfaces of Airtight, Sealed Packages Containing Food or Non-Food Products:

This product may be used as a final sanitizing rinse for hard, non-porous, non-edible outside surfaces of airtight, sealed packages containing food or non-food products at dilution of 1 to 5.7 fl oz per 5 gallons of potable water, this provides 90 -500 ppm peracetic acid. The treated hard, non-porous, non-edible packaging, such as food wraps and meat casings must be removed and discarded before packaged food products are further processed or consumed. All surfaces must be exposed to the sanitizing solution for a period of at least 60 seconds. Drain thoroughly. No rinse necessary. This is not to be used on porous surfaces.

NON PESTICIDAL CLEANING

BOOSTER FOR ALKALINE DETERGENT CLEANING TO CLEAN FOOD PROCESSING EQUIPMENT:

This product is an effective cleaning booster (hypochlorite alternative) for use with alkaline detergents. It may be used as a cleaning additive for Clean-In-Place (CIP) operations involving the circulation cleaning of pipelines, tanks, vessels, evaporators, HTSTs, and other food processing equipment. For cleaning applications as a detergent booster, use 0.2 – 1.1 fl oz per gallon of water, to assist in the removal of organic soils. All hard nonporous food contact surfaces treated with this boosted detergent must be thoroughly rinsed with potable water followed by sanitizing with an approved food contact surface sanitizer (such as this product).

BOOSTER FOR ACID DETERGENT CLEANING TO CLEAN FOOD PROCESSING EQUIPMENT:

This product is an effective cleaning booster for use with acid detergents. It may be used as a cleaning additive for Clean-In-Place (CIP) operations involving the circulation cleaning of pipelines, tanks, vessels, evaporators, HTSTs, and other food processing equipment. For cleaning applications as a detergent booster, use 0.2 – 1.1 fl oz per gallon of water, to assist in the removal of organic soils. Do not exceed 145°F. All hard nonporous food contact surfaces treated with this boosted detergent must be thoroughly rinsed with potable water followed by sanitizing with an approved food contact surface sanitizer (such as this product).

FOGGING IN FILLING, PACKAGING, PROCESSING, STORAGE, WAREHOUSE, AND WORKER WELFARE ROOMS OR AREAS

This product may be used in fogging as an adjunct following regular cleaning and disinfecting procedures for hard surfaces. All surfaces must be disinfected in accordance with this label prior to fogging.

Ensure room is properly ventilated. Vacate all personnel from room during fogging and for a minimum of 2 hours after fogging. Do not enter room until hydrogen peroxide concentrations are correctly tested and are below 1 ppm on a time weighted average. Fog area using one quart of a 1.1 - 1.4 fl oz per 6 gallons of water (80 – 100 ppm peracetic acid) per 1,000 cu. ft. of room volume. Allow surfaces to drain thoroughly before operations are resumed.

STORAGE AND DISPOSAL

Do not contaminate food or feed by storage or disposal or cleaning of equipment.

STORAGE: Never return SAN-I-OX II to the original container after it has been removed. Avoid all contaminants, especially dirt, caustic, reducing agents, and metals. Contamination and impurities will reduce shelf life and can induce decomposition. In case of a decomposition, isolate container, douse container with cool water and dilute SAN-I-OX II with large volumes of water. Avoid damage to containers. Keep container closed at all times when not in use. Keep container out of direct sunlight. To maintain product quality, store at temperatures below 86°F. Do not store on wooden pallets.

Procedure for Leak or Spill: Stop leak if this can be done without risk. Shut off ignition sources: no flames, smoking, flares, or spark producing tools. Keep combustible and organic materials away. Flush spilled material with large quantities of water. Undiluted material should not enter confined spaces.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or Hazardous Waste representative at the nearest EPA Regional Office for guidance. If material has been spilled, an acceptable method of disposal is to dilute with at least 20 volumes of water followed by discharge into suitable treatment system in accordance with all local, state and Federal environmental laws, rules, regulations, standards, and other requirements. Because acceptable methods of disposal may vary by location, regulatory agencies should be contacted prior to disposal.

[Product name] which is to be discarded, should be disposed of as hazardous waste after contacting the appropriate local state or Federal agency to determine proper procedures.

Container Disposal: *(For non-refillable containers equal to or less than 5 gal.)* Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Offer for recycling if available. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Alternatively, an automated inverse drum rinser can be used for the triple rinse process.

(For non-refillable containers greater than 5 gal.) Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Offer for recycling if available. If recycling is not available, puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.