OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

February 11, 2025

SENT BY EMAIL

Erin Romens
erin.romens@ecolab.com
ECOLAB, INC.

Subject: Labeling Notification per Pesticide Registration Notice (PRN) 98-10 - Clarifying the Contact Time for the Glove Sanitization Use
Product Name: XY-12 LIQUID SANITIZER
Admin Number: 1677-52
EPA Receipt Date: 01/02/2025
Action Case Number: 00640352

Dear Erin Romens:

The U.S. Environmental Protection Agency is in receipt of your application for notification under Pesticide Registration Notice 98-10 for the above referenced product. The EPA has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The labeling submitted with this application has been stamped "Notification" and will be placed in our records.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act and is subject to review by the EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the 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. Therefore, should the EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

If you have questions, please contact Aline Heffernan via email at heffernan.aline@epa.gov.

Sincerely,

A. Heffernan

Aline Heffernan, Senior Regulatory Advisor
RMB1, AD
Office of Pesticide Programs

NOTIFICATION

1677-52

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

02/11/2025

XY-12

LIQUID SANITIZER/
MULTI-USE CHLORINE SANITIZER/(SODIUM HYPOCHLORITE) LIQUID SANITIZER/DISINFECTANT
(For Use Only with the Ecolab (Quadexx™)(/Quadexx™PRO) Dispensing System)

Active Ingredient:	
Sodium Hypochlorite	8.4%
Other Ingredients:	91.6%
Total:	100.0%

(provides a minimum available chlorine of 8%)

KEEP OUT OF REACH OF CHILDREN
DANGER (PELIGRO)

(See [back], [side], [inner] [other] [fold-out] [booklet] [hang tag] [product container] [label(s)] [panel(s)] [container] for [complete] [additional] [information] [directions for use] [precautionary statements] [and] [first aid] [and] [storage and disposal])
(Please [refer to] [see] reference sheet for [additional] [directions for use] [information])

(FOR INDUSTRIAL USE)

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER: Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Wear gloves, safety glasses and protective clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

FIRST AID
IF IN EYES: 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 OR CLOTHING: 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: Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

FOR EMERGENCY MEDICAL INFORMATION, CALL TOLL-FREE 1-800-328-0026
OUTSIDE NORTH AMERICA, CALL 1-651-222-5352

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

PHYSICAL AND CHEMICAL HAZARDS:
Strong oxidizing agent: Mix only with water according to label directions. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc.) or organic matter (e.g. urine, feces, etc.) will release chlorine gas which is irritating to eyes, lungs and mucous membranes.

[Note to Reviewer: For containers of 5 gallons or more, the following Environmental Hazards language will appear on the final product label.]

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other public 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 treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

DIRECTIONS FOR USE

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

NOTE: This product degrades with age. Use a chlorine test kit and increase dosage, as necessary, to obtain the required level of available chlorine. Since chlorine reacts readily with dirt and organic matter in dip tanks, the concentration must be checked at least three to four times each day by use of colorimetric kit or titrimetric kit. Once opened, use the entire contents of the container within 30 days.

DO NOT MIX WITH ANYTHING BUT WATER

AVAILABLE CHLORINE TABLE OF PROPORTIONS

0.5 ppm - 1 fl. oz. in 1300 gal. water
50 ppm - 1 fl. oz. in 13 gal. water
100 ppm - 2 fl. oz. in 13 gal water/1 fl. oz. in 6.5 gal. water
200 ppm - 4 fl. oz. in 13 gal. water/2 fl. oz. in 6.5 gal. water
600 ppm - 12 fl. oz. in 13 gal. water
700 ppm – 14 fl. oz. in 13 gal. water

SANITIZATION

SANITIZING NON-POROUS FOOD CONTACT EQUIPMENT

A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to ensure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 2 fl. oz. of XY-12 in 13 gal. of water. If no test kit is available prepare a sanitizing solution by mixing 4 fl. oz. of XY-12 in 13 gal. of water to provide approximately 200 ppm available chlorine by weight.

At 100 ppm available chlorine, this product is an effective sanitizer against *Vibrio cholera* (ATCC 25873), *Escherichia coli* O157:H7 (ATCC 43895), *Listeria monocytogenes* (ATCC 49594), *Salmonella typhi* (ATCC 6539) and *Staphylococcus aureus* (ATCC 6538). Just prior to use, clean all surfaces with proper detergent and rinse with water. Rinse all surfaces thoroughly with the sanitizing solution maintaining contact with the sanitizer for at least 2 minutes. If solution contains less than 50 ppm available chlorine as determined by a suitable test kit, either discard the solution or add sufficient product to reestablish a 200 ppm residual. Allow equipment to drain thoroughly. Do not rinse and do not soak overnight.

SANITIZING POROUS FOOD CONTACT EQUIPMENT

Prepare a 600 ppm solution by thoroughly mixing 3 fl. oz. of this product in 3 gal. water. Clean surfaces in the normal manner. Rinse all surfaces thoroughly with the 600 ppm solution, maintaining contact for at least 2 minutes. Prior to using equipment, rinse all surfaces with a 200 ppm available chlorine solution (4 fl. oz. in 13 gal. of water). Do not rinse and do not soak overnight.

SANITIZING HARD, NON-POROUS OUTSIDE SURFACES OF AIRTIGHT, SEALED PACKAGES CONTAINING FOOD OR NON-FOOD PRODUCTS

XY-12 may be used as a final sanitizing rinse for hard, non-porous outside surfaces of airtight, sealed packages containing food or non-food products. Prepare sanitizing solution by thoroughly mixing 4 fl. oz. of this product in 13 gal. of water to provide approximately 200 ppm available chlorine by weight. All surfaces must be exposed to the sanitizing solution for a period of not less than 2 minutes. Drain thoroughly. No rinse necessary.

SANITIZING EATING AND DRINKING UTENSILS - IMMERSION METHOD

1. Scrape and pre-flush utensils to remove excess soil.
2 Wash with good detergent or compatible cleaner (see your Ecolab representative for a recommendation.)
3. Rinse with clear water.
4. Sanitize in a solution of 100 ppm available chlorine if a chlorine test kit is available. Test and adjust solutions periodically to ensure that the available chlorine does not drop below 50 ppm. If no test kit is available, prepare sanitizing solution to provide 200 ppm available chlorine. Immerse all utensils for at least one minute. Use 2 minute exposure time if required by governing sanitary code.
5. Drain and air dry.

TABLEWARE SANITIZER AND DESTAINER FOR MECHANICAL SPRAY WAREWASHING MACHINES

For sanitizing tableware in low-temperature warewashing machines, inject XY-12 into the final rinse water at a concentration of 100 ppm available chlorine. Do not exceed 200 ppm. Air dry or follow with a potable water rinse.

To ensure that available chlorine concentration does not fall below 50 ppm, periodically test the rinse solution with a suitable test kit and adjust the dispensing rate accordingly. Consult your local (Ecolab) Specialist for technical assistance and further information on sanitizing tableware in warewashing machines.

FORMULATED FOR USE WITH (ECOLAB) AUTOMATIC DISPENSING SYSTEMS. DO NOT USE ON SILVER AND SILVER PLATE.

For brand name product sold for dispensing through computerized systems the following directions for use will appear on the label: For use only with the (Brand Name) Allocation System.

FOOD EGG SANITIZATION

Thoroughly clean all eggs before proceeding. To sanitize clean shell eggs intended for food or food products, apply solution with a coarse spray of 2 fl. oz. of product in 6.5 gal. of water (providing 200 ppm available chlorine). The solution must be equal to or warmer than the eggs, but not to exceed 130 deg F. Wet eggs thoroughly and allow to drain. Eggs that have been sanitized with this chlorine compound may be broken for use in the manufacture of eggs product without a prior potable water rinse. Eggs must be thoroughly dry before casing or breaking. The solution must not be reused for sanitizing eggs.

FOR CONTINUOUS TREATMENT OF MEAT AND POULTRY OR FRUIT AND VEGETABLE CONVEYORS

Wash, rinse and sanitize conveyor equipment. During processing, apply XY-12 at a 200 ppm available chlorine level to conveyors with MIKRO MASTER or other suitable feeding equipment. Controlled volumes of sanitizer are applied to the return portion of conveyor through nozzles so located as to permit maximum drainage of sanitizer from equipment and to prevent puddles on top of belt. During interruptions in operations, apply a coarse spray to equipment, peelers, collators, slicers and saws with MIKRO MASTER dispensed XY-12 solution of 200 ppm available chlorine. Conveyor equipment must be free of product when applying this coarse spray.

NOTE: For mechanical operations, prepared use solutions may not be reused for sanitizing but may be re-used for other purposes such as cleaning.
For manual operations, fresh sanitizing solutions must be prepared as soon as they become diluted or soiled.

GLOVE DIP SANITIZER DIRECTIONS
To prevent cross-contamination from area to area in animal areas and packaging and storage areas of food plants, dip pre-washed (plastic, latex, or other synthetic rubber) non-porous gloved hands into a suitable clean container that contains enough freshly made sanitizing solution to cover the gloved area. Remove gross contamination from gloves before sanitizing. Then place gloved hand in a use-solution 4 fl. oz. of this product in 13 gal. of water to provide approximately 200 ppm available chlorine by weight maintaining contact with the sanitizer for at least 2 minutes. Change the solution in the bath at least daily or more often if the solution appears visibly soiled or contains less than 200 ppm.

SANITIZATION OF NON-POROUS NON-FOOD CONTACT SURFACES
Rinse Method: Prepare sanitizing solution by thoroughly mixing 4 fl. oz. of this product in 13 gal. of water to provide approximately 200 ppm available chlorine by weight. Clean surfaces such as floors and walls in the normal manner. Rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. Do not rinse with water after treatment.

HOUSEHOLD LAUNDRY SANITIZING
In soaking suds - Thoroughly mix 4 fl. oz. XY-12 in 13 gal. of wash water to provide 200 ppm available chlorine. Wait 5 minutes, then add soap or detergent. Immerse laundry for at least 11 minutes prior to starting the wash/rinse cycle.
In Washing Suds - Thoroughly mix 4 fl. oz. XY-12 in 13 gal. of wash water containing clothes to provide 200 ppm available chlorine. Wait 5 minutes, then add soap or detergent and start the wash/rinse cycle.

COMMERCIAL LAUNDRY SANITIZING
Using the appropriate Ecolab dispenser, inject 4 fl. oz. XY-12 into 13 gal. of water to yield 200 ppm available chlorine to the bleach step of the wash process. Test the level of available chlorine if solution has been allowed to stand. Add more XY-12 if the available chlorine level has dropped below 200 ppm.

LAUNDRY BLEACH
Add 2 fl. oz. product in 10 gal. of wash water (125 ppm available chlorine).

CLEANING - HARD SURFACE

BOOSTER FOR ALKALINE DETERGENTS TO CLEAN FOOD PROCESSING EQUIPMENT
XY-12 is an effective bleach cleaning booster for use with alkaline detergents. For cleaning applications as a detergent booster, use 2 **-** 12 fl. oz. XY-12 in 13 gal. water (100 - 600 ppm available chlorine) to aid in the removal of organic soils. All hard non-porous food contact surfaces treated with this boosted detergent must be rinsed thoroughly with a potable water rinse followed by sanitizing with an approved food contact surface sanitizer.

CLEANING HARD SURFACE FOOD PROCESSING EQUIPMENT – NO RINSE
For hard surface cleaning applications, remove gross soil particles from surfaces, then thoroughly clean surfaces using 2 fl. oz. XY-12 in 13 gal. of water (100 ppm available chlorine). Use immersion, coarse spray or circulation techniques as appropriate to clean surfaces. Allow surfaces to drain thoroughly. No rinse necessary.

CLEANING HARD SURFACE PROCESSING EQUIPMENT – RINSE FOR FOOD CONTACT SURFACES
For hard surface cleaning applications, remove gross soil particles from surfaces, then thoroughly clean surfaces using 2 – 12 fl. oz. XY-12 in 13 gal. of water (100 - 600 ppm available chlorine). Use immersion, coarse spray or circulation techniques as appropriate to clean surfaces. Allow surfaces to drain

thoroughly. All hard, non-porous food contact surfaces treated must be rinsed thoroughly with a potable water rinse followed by sanitizing with an approved food contact surface sanitizer.

BACTERIOPHAGE CONTROL
XY-12 helps to temporarily reduce the number of airborne spoilage organisms [*Streptococcus cremoris* and *Streptococcus diacetylactis* bacteriophage] in closed vessels in cheese manufacturing establishments. Spray desired areas using one quart per 1000 cu. ft. of room area with the 600 ppm available chlorine XY-12 solution. A dust mist respirator must be worn when applying the product. Vacate the area of all personnel for a minimum of 2 hours after treatment.

WATER TREATMENT

TREATMENT OF POTABLE WATER IN MEAT PROCESSING PLANTS
For processing water in meat plants, use chlorine level up to 5 ppm available chlorine (1/4 fl. oz. product in 38 gal. water) and for processing water in poultry plants, use chlorine level up to 50 ppm available chlorine (1 fl. oz. product in 13 gal. water).

TREATMENT OF POULTRY PROCESSING WATER
Follow guidelines of local water authority for water potability treatment.
Continuous Feed: Using an automatic metering device, continuously feed this product into the water to obtain and/or maintain a level of **5-50 ppm available chlorine (1 fl. oz. product in 130 gal. water, to 2 fl. oz. product in 26 gal. water).** Confirm target chlorine level with either a chlorine test kit or an automatic testing device. (When the available chlorine level reaches 50 ppm, notify the USDA plant inspector.)
Intermittent Feed: Start up by adding 1.5 fl. oz. of this product in 1,000 gal. of water for each 1 ppm of available chlorine needed. For subsequent doses, check chlorine level with a chlorine test kit. Add enough of this product to maintain the target chlorine level and confirm this level with a chlorine test kit. Do not pour this product directly on poultry product in the water.

WATER CHLORINATION
For farm, private or small municipal water chlorination feed solution with a hypochlorinator until an available chlorine residual of at least 0.2 to 0.6 ppm is attained throughout the distribution system. Check water frequently with a chlorine test kit. Bacteriological sampling must be conducted at a frequency no less than that prescribed by the National Primary Drinking Water Regulations. Contact your local health department for further details.

XY-12 is formulated to control algae and slime growth in recirculating cooling water systems, including evaporative condensers, dairy sweetwater systems, cooling tunnels and warmers. It can also be used in cooling water for thermal processing and pasteurizing operations in dairies, breweries, soft drink and food canning plants.

For use in federally inspected meat and poultry plants. XY-12 helps prevent staining of meat and poultry product containers, when added to the water used to cook and cool the containers. XY-12 also assists with corrosion control and deposit formation on the surfaces of the processing equipment. XY-12 must be used at the same application rates and in the same manner as described in the Cooling Tower / Evaporative Condenser Water directions for use.

COOLING TOWER / EVAPORATIVE CONDENSER WATER
Slug Feed Method –
Initial Dose: When system is noticeably fouled, apply 77 to 154 fl. oz. of this product in 10,000 gal. of water in the system to obtain from 5 to 10 ppm available chlorine. Repeat until control is achieved.
Subsequent Dose: When microbial control is evident, add 16 fl. oz. of this product in 10,000 gal. of water in the system daily, or as needed to maintain control and keep the chlorine residual at 1 ppm. Badly fouled systems must be cleaned before treatment is begun.

Intermittent Feed Method –
Initial Dose: When system is noticeably fouled, apply 77 to 154 fl. oz. of this product in 10,000 gal. of water in the system to obtain a 5 to 10 ppm available chlorine. Apply half (or ⅓, ¼ or 1/5) of this initial dose when half (or ⅓, ¼ or 1/5) of the water in the system has been lost by blowdown.
Subsequent Dose: When microbial control is evident, add 16 fl. oz. of this product in 10,000 gal. of water in the system to obtain a 1 ppm residual. Apply half (or ⅓, ¼ or 1/5) of this initial dose when half (or ⅓, ¼ or 1/5) of the water in the system has been lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.
Continuous Feed Method –
Initial Dose: When system is noticeably fouled, apply 77 to 154 fl. oz. of this product in 10,000 gal. of water in the system to obtain 5 to 10 ppm available chlorine.
Subsequent Dose: Maintain this treatment level by starting a continuous feed of 16 fl. oz. of this product in 10,000 gal. of water lost by blowdown to maintain a 1 ppm residual. Badly fouled systems must be cleaned before treatment is begun.

PUBLIC WATER SYSTEMS
New Tanks, Basins, etc. – Remove all physical soil from surfaces. Place 30 fl. oz. of this product for each 5 cubic feet of working capacity (500 ppm available chlorine). Fill to working capacity and allow to stand for at least 4 hours. Drain and flush with potable water and return to service.
New Filter Sand – Apply 120 fl. oz. of this product for each 150 to 200 cubic feet of sand. The action of the product dissolving as the water passes through the bed will aid in sanitizing the new sand.
New Wells – Flush the casing with a 50 ppm available chlorine solution of water containing 7.5 fl. oz. of this product for each 100 gal. of water. The solution must be pumped or fed by gravity into the well after thorough mixing with agitation. The well must stand for several hours or overnight under chlorination. It may then be pumped until a representative water sample raw water sample is obtained. Bacterial examination of the water will indicate whether further treatment is necessary.
Existing Equipment – Remove equipment from service, thoroughly clean surfaces of all physical soil. Sanitize by placing 32 fl. oz. of this product for each 5 cubic feet capacity (approximately 500 ppm available chlorine). Fill to working capacity and let stand at least 4 hours. Drain and place in service. If the previous treatment is not practical, surfaces may be sprayed with a solution containing 7.5 fl. oz. of this product for each 5 gal. of water (approximately 1000 ppm available chlorine). After drying, flush with water and return to service.

DISINFECTION

DISINFECTION OF NON-POROUS NON-FOOD CONTACT SURFACES
Rinse Method: If the product is to be used immediately, prepare a disinfecting solution by thoroughly mixing 12 fl. oz. of this product in 13 gal. of water to provide approximately 600 ppm available chlorine by weight. If the product will be stored for an extended period of time, between 1 to 8 hours, prepare a disinfecting solution by mixing 14 fl. oz. of this product in 13 gal. of water to provide approximately 700 ppm available chlorine by weight. Clean surfaces, such as floors and walls, in the normal manner. Rinse all surfaces thoroughly with the disinfecting solution, maintaining contact with the solution for at least 10 minutes. Do not rinse with water after treatment.

SWIMMING POOL WATER DISINFECTION
For a new pool or spring start-up, superchlorinate with 75 to 150 fl. oz. of product for each 10,000 gal. of water to yield 5 to 10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Adjust and maintain pool water pH between 7.2 to 7.6. Adjust and maintain the alkalinity of the pool to between 50 and 100 ppm.

To maintain the pool, add manually or by a feeder device 16 fl. oz. of this product for each 10,000 gal. of water to yield an available chlorine residual between 0.6 to 1.0 ppm by weight. Stabilized pools should maintain a residual of 1.0 to 1.5 ppm available chlorine. Test the pH, available chlorine residual and alkalinity of the water frequently with appropriate test kits. Frequency of water treatment will depend upon temperature and number of swimmers.

Every 7 days, or as necessary, superchlorinate the pool with 75 to 150 fl. oz. of product for each 10,000 gal. of water to yield 5 to 10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Do not reenter pool until the chlorine residual is between 1.0 to 3.0 ppm. Re-entry into treated pools is prohibited at levels above 4 ppm due to risk of bodily harm.

At the end of the swimming pool season or when water is to be drained from the pool, chlorine must be allowed to dissipate from treated pool water before discharge. Do not chlorinate the pool within 24 hours prior to discharge.

WINTERIZING POOLS
While water is still clear and clean, apply 4 fl. oz. of product in 1000 gal., while filter is running, to obtain a 3 ppm available chlorine residual as determined by a suitable test kit. Cover pool, prepare heater, filter and heater components for winter by following manufacturer's instructions.

SPAS/HOT TUBS
Apply 7 fl. oz. of product in 1000 gal. of water to obtain a free available chlorine concentration of 5 ppm, as determined by a suitable chlorine test kit. Adjust and maintain pool water pH between 7.2 and 7.8. Some oils, lotions, fragrances, cleaners, etc. may cause foaming or cloudy water as well as reduce the efficiency of the product.

To maintain the water, apply 7 fl. oz. of product in 1000 gal. of water over the surface to maintain a chlorine concentration of 5 ppm. Re-entry into treated pools is prohibited at levels above 5 ppm due to risk of bodily harm.

After each use, shock treat with 11 fl. oz. of this product in 500 gal. of water to control odor and algae.

During extended periods of disuse, add 4 fl. oz. of product daily in 1000 gal. of water to maintain a 3 ppm chlorine concentration.

DISINFECTING PHARMACEUTICAL AND COSMETIC SURFACES
XY-12 is recommended for use on pre-cleaned, hard, non-porous, environmental surfaces such as floors, walls and processing equipment in pharmaceutical and cosmetic processing facilities.

Prior to disinfection, clean surfaces in the normal manner. Prepare disinfecting solution by thoroughly mixing 12 fl. oz. of this product in 13 gal. of water to provide approximately 600 ppm available chlorine by weight. Rinse all surfaces with the disinfecting solution, maintaining contact with the solution for at least 10 minutes. Product contact surfaces must be rinsed with sterile water.

For service or additional information, call 1-800-35-CLEAN (352-5326).

FRUIT AND VEGETABLE WASHING

Thoroughly clean all fruits and vegetables in a wash tank. Thoroughly mix 8 fl. oz. of product in 200 gal. of water to make a sanitizing solution of 25 ppm available chlorine. After draining the tank, submerge fruits or vegetables for 2 minutes in a second wash tank containing the recirculating sanitizing solution. Coarse spray rinse vegetables with the sanitizing solution prior to packaging. Rinse fruit with potable water only prior to packaging.

XY-12 ADDITIONAL DIRECTIONS FOR USE
A solution of sodium hypochlorite for control of organisms causing decay of apples, asparagus, cabbage, carrots, cauliflower, celery, cherries, citrus, cucumbers, lettuce, mushrooms, nectarines, onions, peaches, pears, peppers, potatoes, and radishes after harvest.

APPLICATION
For the recommended concentration of available chlorine for various commodities to be treated see the attached table. To obtain a 100 ppm solution of chlorine, add 1.2 gal. XY-12 to 1,000 gal. of water. For other application rates use appropriate dilutions. Rinse treated fruits and vegetables with potable water.

FOR CITRUS CANKER QUARANTINE
Use of XY-12 at 200 ppm is achieved by adding 2.4 gal. XY-12 to 1,000 gal. of water. Apply for two minutes using a suitable coarse spray or dip tank treatment.

Recommended levels of chlorine:

Commodity	ppm of available chlorine to use
Apple	150-200
Artichokes	100-150
Asparagus	125-150
Brussel sprouts	100-150
Carrots	100-200
Cauliflower	300-400
Cherry	75-100
Celery	100-110
Chopped Cabbage[2]	80-100
Chopped Lettuce[2]	80-100
Cucumbers	300-350
Green Onions	75-120
Lemon and Grapefruit	40-50
Melons[5]	100-150
Mushrooms[3]	100-120
Oranges (in drencher)	20-30
Peaches and Nectarines and Plums	50-100
Pears (without buffer)	200-300
Peppers[1,4]	300-400
Potatoes[1,4]	65-125
Radishes	100-150
Stonefruit (Hydrocooler)	30-75
Tomatoes	300-350

NOTE:
1. Concentration given for use in a flow through washer system only.

2. After treatment the adhered moisture must be removed by a centrifugation process.

3. After treatment with the chlorinated water, the mushrooms must be treated with 0.2% sodium bisulfite (anti-oxident) treatment to prevent browning.

4. For treating peppers in a dump tank, use 100-135 ppm Cl_2; for treating potatoes in a pit system, use 100-150 ppm Cl_2; for treating tomatoes in a dump tank system, use 70-120 ppm Cl_2.

5. For hydrocooler, use 10 ppm.

STORAGE & DISPOSAL

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL

PESTICIDE STORAGE: Store this product in a cool, dry area, away from direct sunlight and heat to avoid deterioration. Keep this product in a tightly closed container, when not in use. In case of spill, flood area with large quantities of water. Product or rinsate that cannot be used must be diluted with water before disposal in a sanitary sewer.

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 of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING AND DISPOSAL:

(For containers 5 gal. or less.) Non-refillable container. Do not reuse or refill this container. Triple rinse as follows: Fill container ¼ full with water and recap. Shake for 10 seconds. Drain for 10 seconds after the flow begins to drip. Follow Pesticide Disposal instructions for rinsate disposal. Repeat procedure two more times. Then offer for recycling or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

(For containers >5-55 gal.) Non-refillable container. Do not reuse or refill this container. Triple rinse as follows: Empty remaining contents into application equipment or a mix tank. Fill the container ¼ 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. Turn the container over onto its other 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 procedure two more times. Then offer for recycling or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

(Totes) Verify that the tote is empty. Do not rinse or clean. Seal tote and contact Ecolab for return.

Sealed Container: (Non-refillable sealed container is designed to reduce worker exposure to the concentrate. This container cannot be triple rinsed because it is a closed container. The following text will be used on this container.) Non-refillable sealed container. Do not reuse or refill this container. Wrap empty container and put in trash.

(Note to reviewer: The following can be used for plastic or metal 55 gallon sizes and smaller – to be refilled only by customer for reuse of XY-12)

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before refilling is the responsibility of the refiller. Cleaning the container before final disposal is the responsibility of the person disposing of the container. (Plastic or Metal Containers) To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously, and dispose of rinsate consistent with pesticide disposal instructions. Repeat this rinsing procedure two more times. Then offer for recycling or reconditioning. If not available, puncture and dispose in sanitary landfill. If not triple rinsed, these containers are acute hazardous wastes and must be disposed of in accordance with local, state, and federal regulations.

Net Contents:	1 U.S. Gal. (3.78 L) 5 U.S. Gals. (18.9 L) 55 U.S. Gals. (207.9 L) 300 U.S. Gals. (1134 L) - tote

EPA Reg. No. 1677-52

EPA Est.: 303-IN-1 (L), 1677-CA-2 (R), 1677-GA-1 (M), 1677-IL-2 (J), 1677-MN-1 (P) 1677-TX-1 (D), 1677-WV-1 (V), 5389-NC-1 (G), 70271-CA-2 (C)
Superscript refers to first letter of date code

Manufactured by:
Ecolab Inc.
1 Ecolab Place
St. Paul, MN 55102
(Made in United States of America) (Made in USA)

This product may be patented | Ce produit peut être breveté | Este producto puede ser patentado: www.ecolab.com/patents

(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.))

(Si no puede leer en inglés, pregunte a su supervisor sobre las instrucciones de uso apropiadas antes de trabajar con este producto.)

SECONDARY CONTAINER LABEL

(Note to reviewer: This secondary container label will be used only when the product is diluted at 14 fl. oz. product or less in 13 gal. of water.)
When this product is diluted in accordance with the directions on this label, the dilution container must bear the following statements:

XY-12

(Concentrate Ingredient Statement)
Active Ingredient:
Sodium Hypochlorite.....8.4%
Other Ingredients: 91.6%
Total:.....100.00%

The product in this container must be diluted at the use rate of 14 oz. product or less in 13 gal. of water as directed on the concentrate product label.

Dilution: _____ fl. oz. product in _____ gal. of water

KEEP OUT OF REACH OF CHILDREN

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
Causes moderate eye irritation. Harmful if swallowed or if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

(FIRST AID
If in Eyes: 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. Call a poison control center or doctor for treatment advice.
If on Skin or Clothing: 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: Call a poison control center or doctor for treatment advice. Have a 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.)

FOR EMERGENCY MEDICAL INFORMATION, CALL TOLL-FREE 1-800-328-0026
OUTSIDE NORTH AMERICA, CALL 1-651-222-5352
Have the product container or label with when calling a poison control center or doctor, or going for treatment.
Follow the directions for use listed on the pesticide label when applying this product.

Use solution prepared by end-user
Not for sale or distribution
(Do Not Drink)
EPA Reg. No. 1677-52

{*Note to reviewer: graphics and text may be printed in additional colors, and can be included on label horizontally or vertically*}

Optional marketing language/graphics:

Disinfectant / Sanitizer
Desinfectante

Certified To
NSF/ANSI 60

Certified to ANSI/Standard 60
NSF Category: Disinfection & Oxidation
Maximum Use Level Per Standard 60: 125 mg/L
(Follow manufacturer's use instructions.)

Certified to ANSI/Standard 60
NSF Category: Disinfection & Oxidation
Maximum Use Level Per Standard 60: XXX mg/L
(Follow Manufacturer's use instructions.)

TRUPOWER ECOLAB® ECOLAB®