

46597-2

12/10/2009

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Ms. Elizabeth Tannehill
Consultant for Chemstar Corporation
120 Interstate West Parkway, Suite 120
Lithia Springs, GA 30122

DEC 10 2009

Subject: Q-SAN
EPA Registration No. 46597-2
Amendment Date: July 15, 2009
EPA Receipt Date: July 20, 2009

Dear Ms. Tannehill,

The following amendment, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), section 3(C)(7)(A) is acceptable with the conditions below.

Proposed Amendment

- Addition of microorganisms, use directions and marketing claims
- Revise Storage and Disposal to be in compliance with the Container Rule

Conditions

Revise the label as follows:

- 1.) Revise the first statement under Environmental Hazards section on page 1 to be in agreement with the ADBAC RED by adding the following phrase, "... and aquatic invertebrates."
- 2.) Revise the 14th bullet in left column on page 4 by indicating "hard nonporous surfaces of cervical collars and neck braces."
- 3.) Revise the 6th bullet in the right column on page 4 by deleting the term, tanning, and stating "tattoo."
- 4.) Revise the 1st, 2nd, 3rd, and 4th claims in the left column on page 5 by deleting the phrase, "even when diluted" because the directions require the product to be diluted. This product should not be used as a concentrate on hard nonporous surfaces.

CONCURRENCES

SYMBOL	7510P						
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DATE	12/8/09						

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5.) Revise the 21st claim in the right column on page 5, the 12th claim in the left column on page 7, and the "Disinfecting Hard, Non-Porous Surfaces Against Avian Influenza" and "Special Instructions for Inactivating Avian Influenza A" headings on page 10 and 20 by citing the organism's complete nomenclature, "Avian Influenza A *Virus*."

6.) Revise the 2nd claim in the left column of page 6 by deleting the phrase Institutional Disinfectant (Sanitizer)

7.) Revise the 4th, 5th, and 6th claims in the left column on page 8 by stating the following:

This product is for use as a disinfectant on hard nonporous surfaces (at 625 ppm active) and as a sanitizer on dishes, glassware and utensils (200 ppm) [pubic eating places, dairy processing equipment, and food processing equipment and utensil (at 200 ppm)] [food processing equipment and utensils (at 200-400 ppm)]. (Do not rinse) A potable water rinse is not allowed when used as a sanitizer on food contact surfaces.

8.) Revise the 16th bullet in the left column on page 8 by deleting the phrase, "by the EPA."

9.) Revise the 7th bullet in the right column of page 8 by deleting the phrase, "ready to use" as this product is sold as a concentrate.

10.) The nomenclature for Herpes Simplex Type 1 and 2 is incomplete on page 9. You need to indicate that the microorganisms are viruses by stating "Herpes Simplex Type 1 and 2 *Virus*."

11.) The "Note" under the "Surgical Instrument Presoak" on page 11 is still unclear. The statement, plastic instruments can be immersed until ready to use, contradicts the statement, "Sterilization of instruments is required before use." Therefore, you must revise this section to read as follows:

Plastic instruments can remain immersed until sterilization. Metal instruments must be removed after 10 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle until sterilization. Prolonged soaking will cause damage to metal instruments. Surgical instruments must be sterilized before use.

12.) Since the "Food Processing Premises" section is split between disinfection and food contact sanitizing subsections, the last statement in the first claim and second statement in the second claims in this section on page 11 must be moved to the food contact sanitizing subsection of directions.

13.) Revise the fourth statement under "Fogging in Dairies, Beverage, and Food Processing Plants" on page 12 and "Food Processing Plants Using Fogging Devices" on page 13 as well as the tenth statement under "Sanitizing Hatchery Rooms" on page 20 to read "..... minimum of 2 hours after fogging and a minimum of 4 air exchanges (ACH) per hour in the facility."

CONCURRENCES

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14.) Revise the "Glove Spray Sanitizer Directions" on page 13 and the "by adding the statement, "Gloves must be sanitized before wearing," as the first statement in these directions.

15.) Revise the fourth paragraph of directions under "Sanitizing of Food Processing Equipment and Other Hard Surfaces in Food Processing Locations, Dairies, Restaurants, and Bars" on pages 13 and 14 by adding the statement, "Articles too large for immersing must be thoroughly wetted by rinsing, spraying, or swabbing with 1 oz per 4 gallons use solution for 60 seconds."

16.) Revise the fifth step under Reverse Osmosis Unit directions on page 15 by deleting the statement, "No potable water rinse is allowed," because this contradicts the previous statement requiring the lines to be flushed with potable water.

17.) Revise the "Treatment of Meat and Poultry or Fruit and Vegetable Conveyors" on page 16 by adding the statement, "Allow surfaces to remain wet for at least 60 seconds."

18.) The third statement under "Algae Control" on page 27 must be brought into compliance with mandatory labeling by deleting the term, should, and stating "must."

19.) Revise the "Storage and Disposal" statements on page 28 to be in compliance with PR Notice 2007-4 by correcting as follows:

a) Delete the first two sets of "Storage and Disposal" Statements.

b) Revise the "Pesticide Disposal/Container Handling" statements for Household/Residential Uses" by deleting the phrase, triple rinse or equivalent. Residential containers are exempt from rinsate instructions. Also, revise the subheading to state "Container Disposal".

c) Revise the phrase, "For use on ... with no household/residential uses" to read "For use on Institutional/Commercial/Industrial NonPublic Health Uses."

d) Revise the "Container Handling" statements for Institutional/Commercial/ Industrial containers to read "Container Disposal" and deleting the statements, "Triple rinse (or equivalent). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. If rinsate, cannot be used, follow pesticide disposal instructions. If not triple rinsed, these containers are acute hazardous wastes and must be disposed."

e) Since this label supports public health uses, you must add "Container Disposal" statements for these uses by stating the following:

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(For Use on ... Institutional/Commercial/Industrial Public Health Uses)

CONTAINER DISPOSAL: Non-refillable container. Do not reuse this container to hold materials other than pesticides or diluted pesticides (rinsates). Offer for recycling if available. If not, puncture and dispose of in a sanitary landfill.

RESIDUE REMOVAL INSTRUCTIONS: *(For containers less than 5 gallons)*

Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Fill container 1/4 full with water and recap. Shake 10 seconds. Follow Pesticide Disposal instructions for rinsate disposal. Drain for 10 seconds after the flow begins to drip. Repeat procedure two more times.

RESIDUE REMOVAL INSTRUCTIONS: *(For containers greater than 5 gallons)*

Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Fill container 1/4 full with water. 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 its other end and tip it back and forth several times. Follow Pesticide Disposal instructions for rinsate disposal. Repeat procedure two more times.

20.) Revise the secondary container label on page 31 by deleting the "CAUTION" signal word and stating "DANGER."

Product Chemistry

You have submitted four alternate Confidential Statement of Formula (CSFs) with this application. Alternate formulas #2 and #3 dated 7/15/09 are acceptable. Alternate formulas #4 and #5 dated 7/15/ 09 are not acceptable. A number of the inerts in #4 and #5 are not cleared for use in antimicrobial formulations intended for application to food contact surfaces. Please contact the Agency directly for additional details on these inerts.

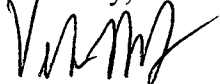
General Comments

A stamped copy of the accepted labeling with conditions is enclosed. Submit 1 copy of your final printed label before distributing or selling the product bearing the revised labeling.

Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3 (c) (5) and section 4 (a) when the Agency requires all registrants of similar products to submit such data.

If the above conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6 (e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions. Should you have any questions concerning this letter, please contact Tracy Lantz at (703) 308-6415 or Velma Noble at (703) 308-6233.

Sincerely,



Velma Noble
Product Manager (31)
Regulatory Management Branch I
Antimicrobials Division (7510P)

7510P:T.Lantz:12/8/09:46597-2relying on new data for 10324-63

CHEMSTAR CORPORATION

120 Interstate West Parkway, Suite 100, Lithia Springs, GA 30122

800-327-0777

E.P.A. Reg. No. 46597-2

E.P.A. Est. No. 46597-GA-01

Q-SAN

Net Contents

Batch No.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. Keep Out of Reach of Children. Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through the skin. Do not get into eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

(If container is 5 gallons or larger the following statement must appear on the label.)

ENVIRONMENTAL HAZARD

This pesticide is toxic to fish. Do not discharge effluent containing Q-SAN 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 Q-SAN into sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.
Do not mix with oxidizers, anionic soaps and detergents.

First Aid

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

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 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 SWALLOWED: 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED: 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 for further treatment advice.

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

Disinfectant - (Food Contact) (Non-Food Contact) Sanitizer - Deodorizer - Fungicide - Mildewstat - Virucide* - With Organic Soil Tolerance For Hospitals, Nursing Homes, Whirlpool, Home, Hotels & Motels, Waterbed Conditioner, Institutional, Industrial, School, Dairy, Equine, Poultry/Turkey Farm, Veterinary, Restaurant, Food Handling and Process Areas, Federally Inspected Meat and Poultry Plants, Bar and Institutional Kitchen Use and for Sanitizing Ice Machines. Controls Algae and Algal Slime Growth in Industrial and/or Commercial Recirculating Cooling Water Towers and Once Through Fresh Water Cooling Systems.

Non-Acid Bathroom Cleaner.

Athletic Surface Disinfectant.

Formulated for effective Poultry Sanitation.

Formulated for effective Swine Premise Sanitation.

Formulated for effective Mushroom Farm Sanitation.

Small Fly Ovicidal Treatment.

Industrial Water Treatment.

(Product of USA) (Made in the USA)

ACTIVE INGREDIENTS:

Alkyl (C₁₄ 60%, C₁₆ 30%, C₁₂ 5%, C₁₈ 5%)

dimethyl benzyl ammonium chloride..... 5.0%

Alkyl (C₁₂ 68%, C₁₄ 32%)

dimethyl ethylbenzyl ammonium chloride..... 5.0%

INERT INGREDIENTS: 90.0%

TOTAL: 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

See left (back) (side) (right) panel (of label) (below) for additional
precautionary statements and first aid statements.

(Note to Reviewer: This information has been verified per DOT regulations. It is NOT required to be on the label but is being requested by a customer.)

TRANSPORTATION INFORMATION

DOT Hazard Class: 8 Corrosive

DOT Proper Shipping Name: Disinfectant Liquid Corrosive (Quaternary Ammonium Compound), 8, UN1903, PGIII

ACCEPTED

with COMMENTS

PELIGRO: SI NO PUEDE LEER EN INGLES, PRECUIRE SU SUPERVISOR SOBRE LAS INSTRUCCIONES DE USO APROPIADAS ANTES DE TRABAJAR CON ESTE PRODUCTO.

DEC 10 2009

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide,

registered under EPA Reg. No. 46597-2

(Note to reviewer: The Table of Contents will not be on any label. This is for our customer's reference only. The page numbers will change as the label changes.)

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ORGANISM LIST

(Note: For reference use only. This is a list of all organisms covered by this label. Please see appropriate Directions for Use for proper use dilution.)

DISINFECTION PERFORMANCE IN INSTITUTIONS (Hospitals, Dental Offices, Nursing Homes, and Other Health Care Institutions): Q-SAN is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum against:

- Botrytis cinerea* (ATCC 12481)
- Burkholderia cepacia* (ATCC 25416)
- Campylobacter jejuni* (ATCC 29428)
- Corynebacterium ammoniagenes* (ATCC 6871)
- Escherichia coli* 0157:H7 (ATCC 35150)
- Enterococcus faecium* (Vancomycin Resistant) (VRE)
- Klebsiella pneumoniae* (ATCC 13883)
- Listeria monocytogenes* (ATCC 984)
- Proteus mirabilis*
- Pseudomonas aeruginosa* (ATCC 15442)
- Salmonella enterica* (ATCC 10708)
- Salmonella typhi* (ATCC 6539)
- Shigella sonnei* (ATCC 9290)
- Staphylococcus aureus* (ATCC 6538)
- Staphylococcus aureus* (Methicillin resistant) (ATCC 33591)
- Community Associated Methicillin Resistant *Staphylococcus aureus* (CA MRSA)
- Yersinia enterocolitica* (ATCC 23715)

GENERAL DISINFECTION PERFORMANCE IN NON-MEDICAL FACILITIES (Households, Schools, Restaurants, Food Services, Beverage and Food Processing Plants and Other Non-Medical Facilities): Q-SAN is bactericidal

according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum against:

- Campylobacter jejuni* (ATCC 29428)
- Escherichia coli* 0157:H7 (ATCC 31250)
- Listeria monocytogenes* (ATCC 984)
- Proteus mirabilis*
- Salmonella enterica* (ATCC 10708)
- Staphylococcus aureus* (ATCC 6538)
- Staphylococcus aureus* (Methicillin resistant) (ATCC 33591)
- Yersinia enterocolitica* (ATCC 23715)

VIRUCIDAL* PERFORMANCE: Q-SAN was evaluated in the presence of 5% serum and found to be effective against the following viruses on hard, non-porous environmental surfaces:

- Avian influenza A (H9N2/Turkey/Wisconsin virus) (ATCC VR-798)
- Avian influenza A (H5N1) virus
- Hepatitis B Virus
- Hepatitis C Virus
- Herpes Simplex Type 1 virus (ATCC VR-260)
- Herpes Simplex Type 2 virus (ATCC VR-734)
- HIV-1
- Human Coronavirus (ATCC VR-740)
- Infectious Bronchitis Virus
- Influenza A2/Japan Virus (ATCC VR-100)
- Vaccinia virus

ANIMAL PREMISE VIRUCIDAL PERFORMANCE: Q-SAN was evaluated in the presence of 5% serum and found to be effective against the following viruses on hard, non-porous environmental surfaces:

- Avian influenza A H9N2/Turkey/Wisconsin virus (ATCC VR-798)
- Avian influenza A (H5N1) virus
- Avian Reovirus (ATCC VR-2449)
- Bovine Viral Diarrhea Virus (ATCC VR-534)
- Canine Coronavirus (ATCC VR-809)
- Canine Distemper Virus
- Equine Arteritis virus (ATCC VR-796)
- Infectious Bovine Rhinotracheitis virus (IBR)
- Infectious Laryngotracheitis Virus
- Newcastle disease virus
- Porcine Respiratory & Reproductive Virus (PRRSV)
- Porcine Rotavirus (ATCC VR-893)
- Pseudorabies virus (ATCC VR-135)
- Transmissible Gastroenteritis (TGE) Virus

NON-FOOD CONTACT SANITIZING PERFORMANCE: Q-SAN is an effective one-step sanitizer against the following:

- Enterobacter aerogenes* (ATCC 13048)
- Staphylococcus aureus* (ATCC 6538)

FOOD CONTACT SANITIZING PERFORMANCE: Q-SAN is effective in 500 ppm hard water (calculated as CaCO₃) according to the AOAC Germicidal and Detergent Sanitizing Action of Disinfectants test against the following bacteria:

- Aeromonas hydrophila* (ATCC 23213)
- Campylobacter jejuni* (ATCC 29428)

Clostridium perfringens (ATCC 13124)
Enterobacter sakazakii (ATCC 29544)
Enterococcus faecalis Vancomycin resistant (ATCC 5129)
Escherichia coli (ATCC 11229)
Escherichia coli O157:H7 (ATCC 43888)
Escherichia coli O111:H8 (ATCC BAA-184)
Listeria monocytogenes (ATCC 984)
Salmonella typhi (ATCC 6539)
Shigella dysenteriae (ATCC 9361)
Staphylococcus aureus (ATCC 6538)
Streptococcus pyogenes (ATCC 12344)
Yersinia enterocolitica (ATCC 23715)

FUNGICIDAL PERFORMANCE: Q-SAN is highly effective against the following:

Trichophyton mentagrophytes
Aspergillus niger

FUNGICIDAL ACTIVITY: Q-SAN is effective against *Trichophyton mentagrophytes* (athlete's foot fungus) (a cause of Ringworm) on inanimate surfaces in the presence of 5% blood serum in locker rooms, dressing rooms, shower and bath areas and exercise facilities.

MARKETING CLAIMS

Q-SAN for use on hard, non-porous surfaces in:

- Hospitals, nursing homes, medical and dental offices and clinics, healthcare facilities, physician offices, operating rooms/theaters, radiology rooms, isolation wards, quarantine areas, hospices, and medical research facilities.
- Patient care rooms & facilities, recovery rooms, Emergency Rooms, X-ray cat labs, exam rooms, newborn nurseries, neonatal units, orthopedics, whirlpool surfaces, footbath surfaces, respiratory therapy, surgi-centers, out-patient surgical centers, labs, blood collection rooms, central supply, housekeeping & janitorial rooms, ophthalmic/optometric facilities.
- EMS & fire facilities, emergency vehicles, ambulance(s), ambulance equipment/surfaces, police cars, fire trucks.
- Day care centers and nurseries, sick rooms, elder care centers, kindergartens, and preschools.
- Acute care institutions, alternate care institutions, home healthcare institutions.
- Life care retirement communities, elder care facilities.
- Restaurants, restaurants and bars, bars, kitchens, taverns, cafeterias, institutional kitchens, fast food operations and food storage areas.
- Supermarkets, convenience stores, retail and wholesale establishments, department stores, shopping malls, gift shops, video stores, bookstores, dressing rooms and laundries, photocopy centers, bicycle shops, auto repair centers.
- Computer manufacturing sites, toy factories.
- Food establishments, coffee shops, donut shops, bagel stores, pizza parlors, liquor stores.
- Crime scenes and funeral homes, morgues, mortuaries, burial vaults, mausoleums, autopsy rooms, cadaver processing areas.

- Police stations, courthouses, correctional facilities, jails, prisons, municipal government buildings, penitentiaries, correctional institutions, bus stations, train stations.
- Institutional facilities, laboratories, factories, business and office buildings, restrooms, hotels and motels, and transportation terminals, maintenance vehicles.
- Public restrooms, public facilities, waysides, travel rest areas, shower rooms, shower stalls, bathrooms, shower and bath areas.
- Hotel, motels, dormitories.
- Kitchens, bathrooms, and other household areas.
- Homes (households), condos, apartments, vacation cottages, summer homes.
- Institutions, schools and colleges, commercial and industrial sites, churches, classrooms, community colleges, universities, athletic facilities and locker rooms, exercise rooms, exercise facilities, gyms, gymnasiums, fieldhouses.
- Cosmetic manufacturing facilities, medical device manufacturing facilities, biotechnology firms, pharmaceutical manufacturing facilities, warehouses.
- Health clubs, spas, tanning salons, tanning spas/beds, footbath surfaces, massage/facial salons, hair/nail/pedicure salons, barber/beauty shops, salons, tattoo parlors.
- Museums, art galleries, post offices, performance/theater centers, banks, libraries, movie houses, bowling alleys.
- Recycling centers.
- Humidifier water tanks. (Not for use in CA)
- Campgrounds, playgrounds, playground equipment, recreational facilities, picnic facilities, sports arenas, sports complexes.
- Food processing plants, USDA inspected food-processing facilities, food storage areas, federally inspected meat and poultry plants, farms, dairy farms, hog farms, equine farms, poultry and turkey farms, and egg processing plants, meat/poultry processing plants, meat/poultry producing establishments, mushroom farms, rendering plants, canneries, caterers, bakeries, meat packing plants, hide and leather processing plants.
- Processing facilities for Fish, Milk, Citrus, Wine, Fruit, Vegetable, Ice Cream, and Potatoes, and beverage plants.
- Tobacco plant premise and equipment.
- Veterinary clinics, animal life science laboratories, animal laboratories, animal research centers, animal quarantine areas, animal holding areas, equine farms, kennels, dog/cat (animal) kennels, animal breeding facilities, breeding and grooming establishments, pet animal quarters, zoos, pet shops, tack shops, operating rooms, washing areas, waiting rooms, examination rooms and other animal care facilities.
- Farmhouses, barns, sheds, tool sheds, barns, cattle barns, swine barns, sheep barns, horse barns, brooder houses, seed houses.
- Household and automotive garages, boats, ships, barges, watercraft, campers, RV's, trailers, mobile homes, cars, automobiles, trucks, delivery trucks, boxcars, tankers, tank trucks, buses, trains, taxis and airplanes, helicopters.

- Cruise lines, cruise ships, airline terminals, airports, shipping terminals, public transportation, transportation terminals.
 - Commercial florist and flower shops.
 - Basements, cellars, bedrooms, attics, living rooms, and porches.
- (Q-SAN) (when used as directed) (may be used) (is formulated to disinfect) on (washable) hard, non-porous (inanimate) (environmental) surfaces such as:
- Food preparation and storage areas.
 - Dishes, glassware, silverware, cooking utensils, eating utensils, plastic and other non-porous cutting boards, plastic and other non-porous chopping blocks, coolers, ice chests, refrigerator bins used for meat, vegetables, fruit and eggs, Tupperware®.
 - Kitchen equipment such as food processors, blenders, cutlery, trash compactors and other utensils.
 - Counters (countertops), Slurpee® machines, stoves (stovetops), sinks (bathroom, kitchen), tub surfaces, appliances, refrigerators, ice machines, microwave ovens and countertop laminates.
 - Interior hard, non-porous surfaces of water softeners, reverse osmosis units, ice machines, water coolers, water holding tanks and pressure tanks.
 - Beer fermentation and holding tanks, bottling or pre-mix dispensing equipment.
 - Wine processing equipment and holding tanks.
 - Citrus processing equipment and holding tanks.
 - Dishes, silverware, glasses, cooking utensils, eating utensils and other similar size food processing equipment can be sanitized by immersion. **NO POTABLE WATER RINSE IS ALLOWED.**
 - Hospital beds, bed railings, bedpans, gurneys, traction devices, MRI, CAT, examining tables, scales, paddles, wheelchairs, cervical collars, neck braces, spine backboards, stretchers, unit stools, CPR training mannequins, curing lights, light lens covers, slit lamps, operating room lights, operating tables, oxygen hoods, dental chairs/countertops, examination tables, X-ray tables, washing areas, anesthesia, carts, gurneys, stretchers.
 - Ultrasonic baths, whirlpools, whirlpool bathtubs.
 - Highchairs, baby cribs, diaper changing stations, infant bassinets/cribs/warmers/incubators/care equipment, folding tables, hampers, laundry pails.
 - Shower stalls, shower doors and curtains, bathtubs and glazed tiles, chrome plated intakes, toilets, toilet seats, toilet bowls, toilet bowl surfaces, urinals, empty diaper pails, portable and chemical toilets and latrine buckets, vanity tops, glazed porcelain, glazed tile and restroom fixtures, bathroom fixtures.
 - Glass, laminated surfaces, metal, stainless steel, glazed porcelain, glazed ceramic, sealed granite, sealed marble, plastic (such as polycarbonate, polyvinylchloride, polystyrene or polypropylene), sealed limestone, sealed slate, sealed stone, sealed terra cotta, sealed terrazzo, chrome and vinyl, Plexiglass®, vanity tops.
 - Tables, chairs, desks, folding tables, workstations, bed frames, lifts, washable walls, cabinets, doorknobs and garbage cans/pails, trash barrels, trash cans, trash containers, cuspidors and spittoons.

- Enameled surfaces, painted (finished) woodwork, Formica®, vinyl and plastic upholstery, washable wallpaper.
- Sealed foundations, steps, plumbing fixtures, finished baseboards and windowsills.
- Exhaust fans, refrigerated storage and display equipment, coils and drain pans of air conditioning and refrigeration equipment and heat pumps.
- Large inflatable non-porous plastic and rubber structures such as animals, promotional items, moonwalks, slides, obstacle course play and exercise equipment.
- Hard, non-porous surfaces of picnic tables and outdoor furniture or Non-wooden Picnic tables and outdoor furniture except cushions and wood frames. *(Note: Only one statement will be used on label.)*
- Tanning equipment. *(Not for use on needles or other skin piercing instruments)*
- Playground equipment.
- Automobile interiors.
- Maintenance equipment.
- Telephones and telephone booths.
- Drinking fountains and breakrooms.
- External lenses vision correction including eyeglasses (not for use on contact lenses), protective eyewear, goggles, light lens covers, optical instruments/implements.
- Hair clippers, cutting implements, plastic rollers, washable nail files.
- Hard hats, headphones.
- Kennel runs, cages, kennel/cage floors, conductive flooring, examination tables, veterinary x-ray tables.
- Hatchers, setters, trays, racks, egg flats, walls, floors, ceilings, chick boxes, egg cases, vans and trash containers.
- Wrestling and gymnastic mats, athletic training tables, physical therapy tables, exercise equipment.
- Windows and mirrors.
- Crypton Barrier fabric

Q-SAN contains no phosphorous.

Q-SAN is a phosphate-free formulation designed to provide effective cleaning, deodorizing and disinfection in areas where housekeeping is of prime importance in controlling the hazard of cross contamination on treated surfaces.

Q-SAN is an economical concentrate that can be used with a mop and bucket, trigger sprayers, sponge or by soaking.

Q-SAN can be applied through foaming apparatus, low-pressure sprayers, and fogging (wet misting) systems. Follow manufacturers' instructions when using this equipment.

Use Q-SAN on multi-touch surfaces responsible for cross-contamination.

Q-SAN is for use as a disinfectant on hard, non-porous surfaces (at 469 ppm active quat). A potable water rinse is required after application on food contact surfaces.

Q-SAN is for use as a sanitizer on hard, non-porous, non-food contact surfaces (200 ppm active quat). A potable water rinse is required.

Kills (99.9% of) (any disinfection organism listed above) (on hard, non-porous surfaces) (even when diluted).

Kills (99.9% of) (common) (household) (institutional) (kitchen) germs (on (the) floor(s)) (even when diluted).

Kills (99.9% of) (household) (institutional) (kitchen) bacteria –and/or– germs ((that get tracked into your –or– home) (by shoes –and/or– pets –and/or– kids) (from outside) (every day) (even when diluted).

Kills (99.9% of) (kitchen) (bathroom) (household) (institutional) bacteria (on (the) floor(s)) (even when diluted) (ordinary dish soap can't).

Kills –and/or– (helps(s)) eliminate(s) –and/or– disinfects –and/or– destroy(s) –and/or– remove(s) –and/or– (help(s)) get(s) rid of –and/or– reduces –and/or– fights –and/or– effective against (99.9% of) (the) (common) (list use site/surface) (bacteria –and/or– viruses) –or– germs.

Kills –and/or– (helps(s)) eliminate(s) –and/or– disinfects –and/or– destroy(s) –and/or– remove(s) –and/or– (help(s)) get(s) rid of –and/or– reduces –and/or– fights –and/or– effective against (99.9% of) (the) ((bacteria –and/or– viruses) (and other germs)) –or– germs ((commonly) found in –or– on (the) (list use site/surface).

Kills –and/or– (helps(s)) eliminate(s) –and/or– disinfects –and/or– destroy(s) –and/or– remove(s) –and/or– (help(s)) get(s) rid of –and/or– reduces –and/or– fights –and/or– effective against (99.9% of) (the) ((bacteria –and/or– viruses) (and other germs)) –or– germs ((commonly) found on (the) (list use site/surface) surfaces your kids –and/or– pets (may) touch every day.

Kills –and/or– (helps(s)) eliminate(s) –and/or– disinfects –and/or– destroy(s) –and/or– remove(s) –and/or– (help(s)) get(s) rid of –and/or– reduces –and/or– fights –and/or– effective against (99.9% of) (common) (household) ((bacteria –and/or– viruses) (and other germs)) –or– germs (on) (from) (your) (children's) toys.

Kills –and/or– (helps(s)) eliminate(s) –and/or– disinfects –and/or– destroy(s) –and/or– remove(s) –and/or– (help(s)) get(s) rid of –and/or– reduces –and/or– fights –and/or– effective against (99.9% of) (list disinfectant organism) ((commonly) found –in/or– on (the) (list use site/surface)).

Kills –and/or– (helps(s)) eliminate(s) –and/or– disinfects –and/or– destroy(s) –and/or– remove(s) –and/or– (help(s)) get(s) rid of –and/or– reduces –and/or– fights –and/or– effective against (99.9% of) (the) flu (influenza) virus ((commonly) found –in/or– on (the) (list use site/surface)).

Kills –and/or– (helps(s)) eliminate(s) –and/or– disinfects –and/or– destroy(s) –and/or– remove(s) –and/or– (help(s)) get(s) rid of –and/or– reduces –and/or– fights –and/or– effective against (the) (list use site/surface) (from) (99.9% of) (common) (household) ((bacteria –and/or– viruses) (and other germs)) –or– germs (this season –or– flu season).

Kills bacteria on (the) surfaces (your kids –and/or– pets touch every day).

(Kills) (Eliminate(s)) (Remove(s)) (Get(s) rid of) (99.9% of) (the) germs –and/or– bacteria –and/or– viruses (in your home –and/or– (office –or– work (place) (area) (environment)) (school) (classroom) (kitchen)).

Q-SAN meets AOAC efficacy standards for hard surface non-food contact sanitizers.

Q-SAN meets AOAC efficacy standards for hard, non-porous surface sanitizers.

One-step cleaner.

Cleans and shines.

Antibacterial.

Q-SAN delivers non-acid disinfection performance in an economical concentrate.

Cross-contamination is of major housekeeping concern. Q-SAN has been formulated to aid in the reduction of cross-contamination on treated surfaces not only in hospitals, but also in schools, institutions and industry.

Q-SAN is an effective sanitizer in the presence of soils on non-food contact surfaces. (Effective sanitizer in the presence of soils.)

Q-SAN is an effective disinfectant/non-food contact sanitizer in the presence of 5% serum contamination. (Effective sanitizer in the presence of 5% serum contamination.)

Q-SAN is for use in kitchens, bathrooms, and other household areas.

Q-SAN is a multi-surface cleaner, deodorizer and disinfectant. Use on windows, mirrors, and other non-food contact glass surfaces.

Q-SAN can be used in work areas such as tool rooms and garages for odor control and light duty cleaning.

Great for use (on) (in) the (kitchen), (bathroom), (floors) and other household areas. Removes (eliminates) odors. Deodorizes. Will not harm most surfaces.

Will not harm most surfaces. For a cleaner, fresher household. Removes stains. Removes dirt. Non-staining. Clear formula.

Cleans everyday kitchen messes like dirt, grease and food stains. Cuts through tough grease and grime.

Disinfects (and Sanitizes) kitchen surfaces (bathroom surfaces and floors). Sanitizes kitchen surfaces (bathroom surfaces and floors). Kills germs. Kills household bacteria.

Kills common kitchen (bathroom) germs (bacteria) (and viruses*).

Q-SAN has been designed specifically for hospitals, nursing homes, schools, food processing plants, food service establishments, dairies, restaurants, bars and other institutions where disinfection and sanitation is of prime importance.

Q-SAN provides sanitizing, disinfecting and deodorizing in hospitals, food processing plants, dairies, restaurants, bars and other institutions. When used as recommended, it is effective as a sanitizer against *Escherichia coli* and *Staphylococcus aureus*, and as a disinfectant against *Staphylococcus aureus*, *Salmonella choleraesuis* and *Pseudomonasaeruginosa*.

Q-SAN deodorizes those areas which generally are hard to keep fresh-smelling, such as garbage storage areas, empty garbage bins and cans, pet areas and other areas which are prone to odors caused by microorganisms.

Q-SAN is a concentrated Hospital Use disinfectant that is effective against a broad spectrum of bacteria, is virucidal*, (and) fungicidal, and eliminates odor causing bacteria when used as directed.

For larger areas, such as operating rooms and patient care facilities, Q-SAN is designed to provide both general cleaning and disinfection.

Will not cause swelling of transducer membrane or harm compressor plates.

Q-SAN is a versatile sanitizer and broad-spectrum disinfectant formulated for use in Ultrasonic Baths (Ultrasonic cleaning units).

Kill Avian Influenza on pre-cleaned environmental surfaces.

Q-SAN is a one-step disinfectant that is effective against a broad spectrum of bacteria, is virucidal* (including HIV-1, HCV & HBV) and inhibits the growth of mold and mildew and their odors when used as directed.

Hospital Use Disinfectant. Institutional Disinfectant (Sanitizer).

Efficacy tests have demonstrated that Q-SAN is an effective bactericide, virucide and fungicide in the presence of organic soil (5% blood serum).

Q-SAN meets AOAC Use – Dilution Test Standards for hospital disinfectants.

Q-SAN has passed the Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces Utilizing (*Duck*) Hepatitis B Virus.

Q-SAN has passed the Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces Utilizing Hepatitis C Virus. (*Not for use in California*)

(OR)

Q-SAN has passed the Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces Utilizing Bovine Viral Diarrhea Virus BVDV (surrogate for human Hepatitis C virus).

Q-SAN has passed the Virucidal Efficacy of a Disinfectant for Use on Inanimate Environmental Surfaces Utilizing Human and Canine Coronavirus.

Q-SAN is a disinfectant and non-food contact sanitizer for Cleanroom, and Laboratory areas to disinfect washable, hard, non-porous non-food contact surfaces such as Laminar-airflow equipment and BioSafety Cabinet work surfaces and exterior surfaces of the following: countertops, sinks, plumbing fixture surfaces, and Incubators, Refrigerators and Centrifuge surfaces of metal, stainless steel, glass, plastic (such as polystyrene or polypropylene), Formica®, and vinyl.

Q-SAN is a one-step (hospital-use) germicidal (disinfectant) cleaner and deodorant (odor-counteractant) (odor neutralizer) designed for general cleaning, (and) disinfecting, (deodorizing) (and controlling mold and mildew on) (of) hard, non-porous environmental surfaces. Q-SAN cleans quickly by removing dirt, grime, mold, mildew, food residue, body oils, dead skin, blood and other organic matter commonly found in hospitals (and) (in health care facilities) (on medical surfaces), nursing homes, schools and colleges, (day care centers), (medical) offices, funeral homes, veterinary clinics, pet shops, (equine farms), animal life science laboratories, hotels, motels, public areas and restrooms, foodservice establishments (restaurants) and federally inspected meat and poultry establishments (food [processing] plants). It (also) eliminates odors leaving (restroom) surfaces smelling clean and fresh. Use where odors are a problem.

Q-SAN cleans, disinfects and deodorizes (hard, non-porous environmental hospital (medical) surfaces) in one step (with no rinsing required). Its non-abrasive formula is designed for use on (Use daily on) (the following) hard, non-porous environmental surfaces: vinyl, painted surfaces, plastic (surfaces), glazed ceramic, glazed porcelain, chrome, stainless steel, brass, copper, laminated surfaces and baked enamel surfaces associated with floors, walls, ceilings, tables, chairs, countertops, telephones, fixtures, glazed tile, toilets, toilet bowls, urinals, sinks found in (health care facilities [hospitals]), patient rooms, operating rooms, ICU areas, shower rooms, and locker rooms. It can also be used to preclean and disinfect (hospital items: wheelchairs, [hospital] [patient] bed rails and linings, wash basins, bed pans, medical equipment surfaces, food establishments, (restaurants), (commercial kitchens) & restrooms) any washable (food and non-food contact) surface (where disinfection is required). A potable water rinse is required when disinfecting food contact surfaces. Do not use on glasses, dishes, utensils, or interior surfaces of appliances.

Use Q-SAN to clean, sanitize and disinfectant non-porous ambulance equipment and surfaces by rinsing all equipment that comes in prolonged contact with skin before reuse with clean warm water (about 120°F), and allow to air dry. (Precaution: Cleaning at 120°F temperature will avoid overheating and distortion of the ambulance equipment and surfaces that would necessitate replacement.)

Q-SAN is a versatile cleaner and broad-spectrum disinfectant and sanitizer formulated for use on bath and therapy equipment (Whirlpools).

Q-SAN maximizes (improves) labor results by effectively controlling odors.

When used as directed, Q-SAN will deodorize surfaces in restroom and toilet areas, behind and under sinks and counters, garbage cans and garbage storage areas, and other places where bacterial growth can cause malodors.

Q-SAN controls (reduces) (eliminates) (neutralizes) (destroys) odors to make your home (kitchen) (bathroom) sanitary.

Q-SAN neutralizes musty odors and tough odors from smoke, pet accidents, and spills on contact.

Q-SAN is specially formulated to effectively eliminate offensive odors caused by mold and mildew.

Q-SAN is effective against household germs (bacteria) and odors caused by animal waste, septic tank or sewage backup, smoke and bathroom and kitchen odors.

Q-SAN inhibits bacterial growth on moist surfaces and deodorizes by killing microorganisms that cause offensive odors. (*Not for use in California.*)

Q-SAN is for use in household and commercial humidifiers. Use of Q-SAN will control unpleasant (malodors) odors. (*Not for use in California.*)

Q-SAN is a one-step cleaner and deodorant (odor counteractant) (odor-neutralizer) designed for general cleaning, (and) disinfecting, (deodorizing) (and controlling mold and mildew) on hard, non-porous environmental surfaces.

Q-SAN cleans, disinfects and deodorizes surfaces by killing odor causing microorganisms and mold and mildew. Its non-abrasive formula is designed for use on (restroom surfaces): glazed ceramic (restroom) tile, glazed porcelain, chrome, stainless steel and plastic surfaces associated with floors, walls, fixtures, toilets, urinals, sinks, shower rooms, and locker rooms.

Q-SAN is effective at controlling mold and mildew (odor) on shower curtains.

Q-SAN provides long lasting freshness against tough (pet) odors, such as odors from litter boxes and pet accidents.

Q-SAN cleans, shines, deodorizes and disinfects all hard, non-porous surfaces listed on the label. It inhibits the growth of mold and mildew, leaving bathrooms and kitchens clean and fresh smelling.

Eliminates odors caused by bacteria (and) (mildew) (and) (non-fresh foods). Kills odor causing bacteria in the kitchen (bathroom).

Q-SAN is for non-scratch cleaning of showers and tubs, shower doors and curtains, fixtures and toilet bowls.

Q-SAN will not leave a grit or soap scum.

Q-SAN is a no-rinse disinfectant cleaner that disinfects, cleans and deodorizes in one labor saving step.

Kills Athlete's Foot fungus on bathroom surfaces.

Q-SAN is an effective fungicide against Trichophyton mentagrophytes (the athlete's foot fungus) when used on surfaces in areas such as locker rooms, dressing rooms, shower and bath areas, exercise facilities.

Q-SAN is a (concentrated) non-acid (bowl and) bathroom cleaner, which cleans, disinfects and deodorizes in one easy step. It cleans, disinfects and deodorizes surfaces by killing many odor-causing microorganisms and mold and mildew. Its non-abrasive formula is designed for use (Use daily) on ([hard, non-porous environmental] restroom surfaces): glazed ceramic (restroom) tile, glazed porcelain, chrome, stainless steel and plastic surfaces associated with floors, walls, fixtures, toilets, urinals, sinks, shower rooms and locker rooms.

Malodor(s) (Activity) (Odor) (Counteractancy) – eliminates (destroys) odors and odor-causing bacteria in restroom areas, behind and under sinks and counters, and storage areas (and other places where bacterial growth can cause malodors).

Q-SAN is a versatile Disinfectant & Sanitizer for Veterinarian, Veterinary Practice, Animal Care, Animal Laboratory, and Agricultural and Farm Premise applications.

Q-SAN cleans by removing dirt, grime, mold, mildew, blood, urine, fecal matter and other common soils found in animal housing facilities, livestock, swine poultry facilities, grooming facilities, farms, kennels, pet stores, veterinary clinics, laboratories or other small animal facilities. It (also) eliminates odors leaving surfaces smelling clean and fresh.

Q-SAN can be used to disinfect, clean and deodorize terrarium and small animal cages, hot rock, substrate and cage furniture (plastic terrarium ornaments, driftwood, heat caves and water dishes). (Use on rocks and driftwood not allowed for use in California.)

Q-SAN cleans, disinfects and deodorizes (hard, non-porous environmental surfaces) in one step. Its non-abrasive formula is designed for use on (Use daily on) (Use daily to clean and disinfect) (hard, non-porous surfaces): plated or stainless steel, aluminum, chrome, glazed porcelain, glazed tile, laminated surfaces (associated with floors, walls, countertops, cages, kennels, animal equipment) found in (barns, pens and stalls) animal housing facilities.

Q-SAN has been designed for veterinarians, animal groomers, hair stylists, barbers and beauticians, for use in disinfecting and maintaining clippers. It acts as a virucide and bactericide while also cleaning. Regular use will help to maintain blades that operate with reduced friction and with smoother clipping action. Will help to prolong equipment life. Q-SAN is designed for use in pet salons, animal hospitals, barber and beauty shops. When used as directed it will disinfect metal clipper blades as well as many other hard, non-porous surfaces.

Q-SAN cleans rodent soiled areas.

Q-SAN is for use in Poultry Premise Sanitation (Hatcheries), Egg Receiving Area, Egg Holding Area, Setter Room, Tray Dumping Area, Trays, Buggies, Racks, Egg Flats, Chick Holding Room, Hatchery Room, Chick Processing Area, Chick Loading Area, Poultry Buildings, Ceilings, Side walls and Floors, Drinkers, and all other hard, non-porous Poultry House related equipment, and surfaces in the Hatchery environment.

Q-SAN is for use in Swine Premise Sanitation, Waterers and Feeders, Hauling Equipment, Dressing Plants, Loading Equipment, Farrowing Barns and Areas, Nursery, Blocks, Creep Area, Chutes.

Kill Avian Influenza A on pre-cleaned environmental surfaces.

Q-SAN is an effective antimicrobial cleaner, designed for use by wholesale and retail florists, shippers and green houses.

When used as directed, Q-SAN will disinfect hard, non-porous surfaces, such as flower buckets, floors and walls of coolers, design and packing benches, and countertops.

Q-SAN can be relied on to deodorize coolers, buckets, garbage pails and other areas where obnoxious odors develop.

Use Q-SAN to clean, disinfect and deodorize flower buckets, walls, floors of coolers, shippers, greenhouse packing areas, garbage pails and other areas where obnoxious odors develop.

Q-SAN can be used as a general purpose antimicrobial detergent in florist shops, wholesale florist, shippers, greenhouse packing areas and other commercial floriculture places for efficient cleaning and antimicrobial action against certain bacteria which cause: (Not for use in California.)

1. Plugging of stems with slime, which reduces uptake of water for various flowers, including roses, chrysanthemums, gladioli and tulips.
2. Production of ethylene gas, which can injure blooms of the various sensitive flowers including carnations, snapdragons, some orchids, baby's breath, sweet peas, freesia and alstroemeria.

Q-SAN is a general disinfectant. It will help in the control of fungal, bacterial and viral plant pathogens, bacterial and fungal leaf rots, slime forming fungi, and odor causing bacteria and algae. It is designed specifically for use where disease cross contamination may occur between plants. Pre-clean all surfaces prior to application of the disinfectant solution. All inanimate surfaces must be thoroughly wetted and remain wet for 10 minutes for disinfection. Then wipe up excess or allow to air dry. Fresh solution must be prepared daily and when use solution becomes visibly dirty. To apply solution for sprayer applications, use as a coarse spray only.

Use Q-SAN to disinfect non-porous salon/barber tools and instruments such as combs, brushes, scissors, clippers, plastic rollers, trimmers, razors, blades, tweezers and manicure instruments, and footbath surfaces.

Use Q-SAN to sanitize and disinfect non-porous salon/barber tools and instruments such as combs, brushes, scissors, clippers, plastic rollers, trimmers, razors, blades, tweezers and manicure instruments.

Use Q-SAN to clean, sanitize and disinfect hard non-porous surfaces of personal protective safety equipment, protective headgear, athletic helmets, wrestling/boxing headgear, athletic shoe soles, hard hats, half mask respirators, full face breathing apparatus, gas masks, goggles, spectacles, headphones, face shields, hearing protectors and ear muffs. Rinse all equipment that comes in prolonged contact with skin before reuse with clean warm water (about 120°F), and allow to air dry. (Precaution: Cleaning at 120°F temperature will avoid overheating and distortion of the personal safety equipment that would necessitate replacement.)

Use to clean and disinfect non-medical (i.e. industrial and fire fighting) respirators in industrial, commercial and institutional premises.

Use (on) (to clean and disinfect) non-porous athletic mats, wrestling mats, gymnastic mats, exercise equipment and training tables.

Floor cleaner.

Q-SAN provides effective cleaning strength that will not dull most metal-interlock floor finishes, and does not require a rinse prior to recoat.

Controls the growth of odor-causing and slime-forming bacteria used in waterbed uses. Controls odors caused by bacteria. Prevents bubbles, preserves plasticizers, conditions vinyl interior, sequesters minerals.

For use in:

Federally inspected meat and poultry plants on all hard, non-porous surfaces in inedible product processing areas, non-processing areas and/or exterior areas. All surfaces must be thoroughly rinsed with potable water.

Federally inspected meat and poultry plants as a floor and wall cleaner for use in all departments. Food products and packaging material must be removed from the room or carefully protected. All surfaces must be thoroughly rinsed with potable water.

Federally inspected meat and poultry plants as a disinfectant agent for use in all departments. Food products and packaging material must be removed from the room or carefully protected. Use product in accordance with its label. All surfaces must be thoroughly rinsed with potable water.

Q-SAN is for use as a sanitizer on dishes, glassware and utensils (at 200 ppm active) and as a disinfectant on hard, non-porous surfaces (at 625 ppm active). A potable water rinse is not allowed when used as a sanitizer on food contact surfaces.

OR

Q-SAN is for use as a sanitizer in public eating places, dairy processing equipment and food processing equipment and utensils (at 200 ppm active) and as a disinfectant on hard, non-porous surfaces (at 625 ppm active). A potable water rinse is not allowed (Do not rinse) when used as a sanitizer on food contact surfaces.

Q-SAN is for use as a sanitizer on food processing equipment and utensils (at 200-400 ppm active) and as a disinfectant on hard, non-porous surfaces (at 625 ppm active). A potable water rinse is not allowed when used as a sanitizer on food contact surfaces.

Q-SAN is for use as a sanitizer in bottling and beverage dispensing equipment.

Q-SAN is for use as a sanitizer in sanitary filling of bottles and cans.

Q-SAN is for use in sanitizing bottles or cans in the final rinse application, and for external spraying of filling and closing machines.

Q-SAN is for use as a sanitizer in beer fermentation and holding tanks.

Q-SAN is for use as a sanitizer in wineries for use on holding tanks, floors and processing equipment.

Q-SAN is for use as a Food Grade Egg Shell sanitizer, with best results achieved in water temperatures ranging from 78°-110°F.

Cleans everyday kitchen messes.

Cleans kitchen surfaces and food preparation areas.

Escherichia coli (E. coli) and *Staphylococcus aureus* (Staph) are common bacteria found where food is prepared and stored. Q-SAN kills these bacteria and helps prevent cross-contamination on treated kitchen surfaces listed on this label.

Q-SAN has been cleared by the EPA in 40CFR180.940 for use on food processing equipment, utensils and other food-contact articles at a concentration of 200-400 ppm active.

Q-SAN meets AOAC Germicidal and Detergent Test Standards for food contact surfaces.

Regular, effective cleaning and sanitizing of equipment, utensils and work or dining surfaces which could harbor food poisoning microorganisms minimizes the probability of contaminating food during preparation, storage or service. Effective cleaning will remove soil and prevent the accumulation of food residues, which may decompose or support the rapid development of food poisoning organisms or toxins. Application of effective sanitizing procedures reduces the number of those microorganisms which may

be present on equipment and utensils after cleaning, and reduces the potential for the transfer, either directly through tableware such as glasses, cups and flatware, or indirectly through food.

To prevent cross contamination, kitchenware and food contact surfaces of equipment must be washed, rinsed with potable water and sanitized after each use and following any interruption of operation during which time contamination may have occurred.

Where equipment and utensils are used for preparation of foods on a continuous or production line basis, utensils and the food contact surfaces of equipment must be washed, rinsed and sanitized at intervals throughout the day on a schedule based on food temperature, type of food and amount of food particle accumulation.

Q-SAN is effective against the control of small flies on floors, walls, drains, countertops, metal surfaces, painted surfaces, glazed porcelain, glazed tile, glass, chrome, rubber, and plastic in restaurants, kitchens, dishwashing areas, and bar and wait station areas.

Q-SAN cleans by removing dirt, grime and food soils in food preparation and processing areas. Its non-abrasive formula will not harm (scratch) surfaces. It cleans, disinfects and eliminates odors leaving surfaces smelling clean and fresh. Use where odors are a problem.

Eliminates (kills) 99.999% of bacteria (germs) commonly found on kitchen surfaces (in 60 seconds).

Kills 99.999% of bacteria (germs) like, *Escherichia coli*, *Campylobacter jejuni*, *Escherichia coli* O157:H7, *Staphylococcus aureus*, *Listeria monocytogenes*, *Yersinia enterocolitica* and *Shigella dysenteriae* on food contact kitchen surfaces in 60 seconds.

Q-SAN is a ready to use sanitizer for hard nonporous non-food contact surfaces (200 ppm active) according to the method for Sanitizers – Non-Food Contact Surfaces, modified in the presence of 5% organic serum in 3 minutes against:

(OR)

Q-SAN is an effective one-step non-food contact sanitizer on hard-non-porous surfaces against the following:

Enterobacter aerogenes

Staphylococcus aureus

Use Q-SAN on finished floors, high speed burnished floors, conductive flooring, washable walls, tables, chairs, bathroom bowls, sinks, basins, shower stalls, tubs, glazed tiles, toilet, countertops, stove tops, exterior surfaces of appliances and refrigerators, cabinets, garbage cans, outdoor furniture (except cushions and wood frames), desks, telephones, door knobs and handles, and glass surfaces including windows and mirrors.

Disinfects, cleans, and deodorizes the following hard, non-porous inanimate surfaces: floors, walls, (non-medical) metal surfaces, (non-medical) stainless steel surfaces, glazed porcelain, plastic surfaces (such as polypropylene, polystyrene, etc.).

Q-SAN is designed for use on (Use daily on) (the following) (hard, non-porous environmental surfaces): vinyl; painted surfaces, plastic (surfaces), glazed ceramic, glazed porcelain, chrome, stainless steel, aluminum, laminated surfaces and baked enamel surfaces associated with floors, walls, ceilings, tables, chairs, countertops, telephones, fixtures, glazed tile, toilets, urinals, sinks, shower rooms and locker rooms (areas) – any washable (food and non-food contact) surface where disinfection is required. Q-SAN's non-dulling formula eliminates the time and labor normally required for rinsing. A potable water rinse is required for food contact surfaces.

- Concentrate (Concentrated).
- Disinfects (Disinfectant).

- Cleans (Cleaner).
- Deodorizes (Deodorizer).

For use in households.

Will not harm sealed stone, sealed grout, or glazed tile.

Q-SAN is a complete, chemically balanced disinfectant/sanitizer that provides clear use solutions even in the presence of hard water.

DIRECTIONS FOR USE

It is a violation of Federal Law to use Q-SAN in a manner inconsistent with its labeling.

PREPARATION OF DISINFECTION USE SOLUTION: Before using Q-SAN, food products and packaging materials must be removed from the room or carefully protected. Add 3 fluid ounces per 5 gallons of water OR Mix (a) 3-ounce packet with 5 gallons of water (or equivalent use dilution) (469 ppm active quat) to disinfect hard non-porous surfaces. Apply Q-SAN with a brush, cloth, mop, sponge or mechanical spray device. When applied with a mechanical spray device, surfaces must be sprayed until thoroughly wetted. For sprayer applications, use a coarse pump or trigger spray device. Spray 6-8 inches from surface. Do not breathe spray. Rub with brush, sponge, mop or cloth. Treated surfaces must remain wet for 10 minutes. Rinse or allow to air dry. Rinsing of floors is not necessary unless they are to be waxed or polished. Rinse all surfaces that come in contact with food such as countertops, appliances, tables and stovetops with potable water before reuse. Do not use Q-SAN to clean or disinfect utensils, glassware, dishes or interior surfaces of appliances. Prepare a fresh solution at least daily or when use solution becomes visibly dirty.

Note: With spray applications, cover or remove all food products. For heavily soiled areas, a preliminary cleaning is required.

PREPARATION OF DISINFECTION/VIRUCIDAL*/FUNGICIDAL USE SOLUTION: Before using Q-SAN, food products and packaging materials must be removed from the room or carefully protected. Add 4 fluid ounces per 5 gallons of water OR Mix (a) 4-ounce packet with 5 gallons of water (or equivalent use dilution) (625 ppm active quat) to disinfect hard non-porous surfaces. Apply Q-SAN with a brush, cloth, mop or mechanical spray device. When applied with a mechanical spray device, surfaces must be sprayed until thoroughly wetted. For sprayer applications, use a coarse pump or trigger spray device. Spray 6-8 inches from surface. Be sure to wet all surfaces thoroughly. Do not breathe spray. Rub with brush, sponge, mop or cloth. Treated surfaces must remain wet for 10 minutes. Rinse or allow to air dry. Rinsing of floors is not necessary unless they are to be waxed or polished. Rinse all surfaces that come in contact with food such as countertops, appliances, tables and stovetops with potable water before reuse. Do not use Q-SAN to clean or disinfect utensils, glassware, dishes or interior surfaces of appliances. Prepare a fresh solution at least daily or when use solution becomes visibly dirty.

Note: With spray applications, cover or remove all food products. For heavily soiled areas, a preliminary cleaning is required.

DILUTION RATES: General Disinfection – add 3 ounces per 5 gallons of water. Hospital Disinfection – add 4 ounces per 5 gallons of water. Virucidal – add 4 ounces per 5 gallons of water.

For disinfection, a pre-cleaning step is required and recommended. Prepare a fresh solution for each use.

OR

DISINFECTION PERFORMANCE IN INSTITUTIONS (Hospitals, Dental Offices, Nursing Homes, and Other Health Care Institutions): Add 4 ounces of Q-SAN to 5 gallons of water (or equivalent use dilution) (625 ppm active quat) OR mix a 4-ounce packet with 5 gallons of water. Treated surfaces must remain wet for 10 minutes. At this use level, Q-SAN is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum against:

<i>Botrytis cinerea</i> (ATCC 12481)	<i>Pseudomonas aeruginosa</i> (ATCC 15442)
<i>Burkholderia cepacia</i> (ATCC 25416)	<i>Salmonella enterica</i> (ATCC 10708)
<i>Campylobacter jejuni</i> (ATCC 29428)	<i>Salmonella typhi</i> (ATCC 6539)
<i>Corynebacterium ammoniagenes</i> (ATCC 6871)	<i>Shigella sonnei</i> (ATCC 9290)
<i>Escherichia coli</i> 0157:H7 (ATCC 35150)	<i>Staphylococcus aureus</i> (ATCC 6538)
<i>Enterococcus faecium</i> (Vancomycin Resistant) (VRE)	<i>Staphylococcus aureus</i> (Methicillin resistant) (ATCC 33591)
<i>Klebsiella pneumoniae</i> (ATCC 13883)	<i>Yersinia enterocolitica</i> (ATCC 23715)
<i>Listeria monocytogenes</i> (ATCC 984)	<i>Community Associated Methicillin Resistant Staphylococcus aureus</i> (CA MRSA)
<i>Proteus mirabilis</i>	

GENERAL DISINFECTION PERFORMANCE IN NON-MEDICAL FACILITIES (Households, Schools, Restaurants, Food Services, Dairies, Farms, Beverage and Food Processing Plants and Other Non-Medical Facilities): Add 3 ounces of Q-SAN to 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Treated surfaces must remain wet for 10 minutes. At this use level, Q-SAN is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum against:

<i>Campylobacter jejuni</i> (ATCC 29428)	<i>Salmonella enterica</i> (ATCC 10708)
<i>Escherichia coli</i> 0157:H7 (ATCC 31250)	<i>Staphylococcus aureus</i> (ATCC 6538)
<i>Listeria monocytogenes</i> (ATCC 984)	<i>Staphylococcus aureus</i> (Methicillin resistant) (ATCC 33591)
<i>Proteus mirabilis</i>	
<i>Yersinia enterocolitica</i> (ATCC 23715)	

***VIRUCIDAL PERFORMANCE:** At 4 ounces per 5 gallons use level (or equivalent use dilution) (625 ppm active quat), Q-SAN was evaluated in the presence of 5% serum with a 10-minute contact time and found to be effective against the following viruses on hard, non-porous environmental surfaces:

Avian influenza A H9N2/Turkey/Wisconsin virus (ATCC VR-798)	HIV-1 (w/ 2 minute contact time)
Avian Influenza A (H5N1) virus	Human Coronavirus (ATCC VR-740)
Hepatitis B Virus	Infectious Bronchitis Virus
Hepatitis C Virus	Influenza A2/Japan Virus (ATCC VR-100)
Herpes Simplex Type1 (ATCC VR-260)	Vaccinia virus
Herpes Simplex Type 2 (ATCC VR-734)	

NON-FOOD CONTACT SANITIZING PERFORMANCE: Add 1 ounce of Q-SAN to 4 gallons of water (or equivalent use dilution) (200 ppm active) to sanitize hard, non-porous surfaces with a 3-minute contact time. At 200 ppm active, Q-SAN is an effective one-step sanitizer against the following:

<i>Enterobacter aerogenes</i> (ATCC 13048)	<i>Staphylococcus aureus</i> (ATCC 6538)
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FUNGICIDAL ACTIVITY: At 4 ounces per 5 gallons use-level (or equivalent use dilution) (625 ppm active quat) Q-SAN is effective with a 10-minute contact time, against Trichophyton mentagrophytes (athlete's foot fungus) (a cause of Ringworm) on inanimate surfaces in the presence of 5% blood serum in locker rooms, dressing rooms, shower and bath areas and exercise facilities.

CLEANING AND DISINFECTION: For heavily soiled areas, a pre-cleaning step is required. For one step cleaning and disinfection, use 3 fluid ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Apply use solution using a brush, sponge, cloth, mop or pressure sprayer so as to thoroughly wet surface

to be cleaned/disinfected. For sprayer applications, use a coarse spray device. Allow surfaces to remain wet for 10 minutes and then air dry or wipe up excess liquid. Prepare a fresh solution at least daily or when solution becomes visibly dirty or diluted.

(OR)

FOR USE AS A ONE-STEP CLEANER/DISINFECTANT:

1. Pre-clean heavily soiled areas.
2. Apply use solution (3 ounces per 5 gallons) (469 ppm active quat) (or equivalent use dilution) to hard, non-porous environmental surfaces using a sponge, brush, cloth, mop or pressure sprayer.
3. To disinfect, all surfaces must remain wet for ten (10) minutes.
4. Wipe surfaces or let air dry.

Note: All food contact surfaces such as appliances and kitchen countertops must be rinsed with potable water. Do not use Q-SAN to clean or disinfect glassware, utensils, dishes or interior surfaces of appliances.

FOR DISINFECTING HARD, NON-POROUS SURFACES AGAINST AVIAN INFLUENZA A (H5N1): For use in homes, hospitals, hotels, motels and schools, the directions for hospital disinfection must be followed using a rate of 4 oz per 5 gallons of water (625 ppm active quat) (or equivalent use dilution). (OR) For use in animal housing facilities, follow the animal premise directions.

PREPARATION OF NON-FOOD CONTACT SANITIZER USE SOLUTION: With spray applications, cover or remove all food products. Add 1 ounce of Q-SAN to 4 gallons of water (or equivalent use dilution) (200 ppm active). Apply sanitizer use solution to pre-cleaned, hard, non-porous surfaces with a brush, cloth, mop, sponge, sprayer or by immersion. For sprayer applications, use a coarse pump or trigger spray device. Spray 6-8 inches from surface and rub with brush, sponge, mop or cloth. Be sure to wet all surfaces thoroughly. Do not breathe spray. Treated surfaces must remain wet for 3 minutes. Wipe with sponge, mop or cloth or allow to air dry.

(OR)

TO SANITIZE (AND DEODORIZE): Apply use solution to hard, inanimate, non-porous surfaces, thoroughly wetting surfaces as required with a brush, cloth, mop, sponge or sprayer or by immersion. For heavily soiled areas, a preliminary cleaning is required. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Rub with brush, sponge, mop or cloth. Do not breathe spray. Let stand for 5 minutes. Then wipe. Allow surfaces to air dry.

Note: With sprayer applications, cover or remove all food products.

GENERAL DISINFECTANT NON-MEDICAL DILUTION CHART

Ounces of Product	Amount of Water
0.15 ounces	1 quart
0.3 ounces	½ Gallon
0.6 ounces	1 gallon
1.5 ounces	2 ½ gallons
3.0 ounces	5 gallons
6.0 ounces	10 gallons

HOSPITALS, DENTAL OFFICES, NURSING HOMES AND OTHER HEALTH CARE INSTITUTIONS DISINFECTION AND VIRUCIDAL* DILUTION CHART

Ounces of Product	Amount of Water
0.2 ounces	1 quart
0.4 ounces	½ Gallon
0.8 ounces	1 gallon
2.0 ounces	2 ½ gallons

4.0 ounces	5 gallons
8.0 ounces	10 gallons

DILUTION CHART:

For Hospital or Medical Environment claims	4oz/5 gal. water
For General or Broad Spectrum claims	3oz/5 gal. water
For Virucidal* claims	4oz/5 gal. water
For Animal Virucidal claims	4oz/5 gal. water
For Non-Food Contact Sanitizing claims	1oz/4 gal. water
For Food Contact Sanitizing claims at 200 ppm	1oz/4 gal. water
For Food Contact Sanitizing claims at 400 ppm	2oz./4 gal. water
For Fungicide claims	4oz/5 gal. water

HOSPITAL/HEALTH CARE/INSTITUTIONAL

(Note for reviewer: For labels that list medical premises and metal and/or stainless steel surfaces, one of the following FDA/EPA Memorandum of Understanding statements must be used.)

Q-SAN is not to be used as a terminal sterilant/high-level disinfectant on any surface or instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. Q-SAN can be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization or high-level disinfection.

(Or)

Q-SAN is not for use on Medical device surfaces.

INSTITUTIONAL DISINFECTANT DIRECTIONS (Hospitals, Dental Offices, Nursing Homes, and Other Health Care Institutions): For disinfecting floors, walls, countertops, bathing areas, lavatories, bed frames, tables, chairs, garbage pails and other hard, non-porous surfaces, add 4 ounces of Q-SAN to 5 gallons of water (625 ppm active quat) (or equivalent use dilution) OR mix a 4-ounce packet with 5 gallons of water to disinfect hard, non-porous surfaces. Apply use solution to hard, inanimate, non-porous surfaces thoroughly wetting surfaces with a brush, cloth, mop, sponge or sprayer. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Rub with brush, sponge, mop or cloth. Do not breathe spray. Treated surfaces must remain wet for 10 minutes. Rinse or allow to air dry. Prepare a fresh solution at least daily or when use solution becomes diluted or soiled.

Note: With spray applications cover or remove all food products. For heavily soiled areas, a preliminary cleaning is required.

***VIRUCIDAL PERFORMANCE:** At 4 ounces per 5 gallons of water use level (625 ppm active quat) (or equivalent use dilution) treated surfaces must remain wet for ten minutes. For heavily soiled areas, a preliminary cleaning is required. Prepare a fresh solution at least daily or more often if solution becomes diluted or soiled.

At 4 ounces per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) in the presence of 200 ppm hard water (CaCO₃) and 5% serum Q-SAN was proven to be effective against (Duck) Hepatitis B Virus with a contact time of 10 minutes.

At 4 ounces per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) in the presence of 5% organic load Q-SAN was proven to be effective against Bovine Viral Diarrhea Virus BVDV (surrogate for human Hepatitis C virus) with a contact time-of 10 minutes.

At 4 ounces per 5 gallons of water (or equivalent use dilution) in the presence of 5% serum for a two-minute contact time Q-SAN was found to be effective against HIV-1 (AIDS Virus).

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***KILLS HIV, HCV AND HBV ON PRECLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS** in health care setting or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with blood or body fluids and in which the surfaces/objects likely to be soiled with blood or body fluids can be associated with the potential for transmission of Human Immunodeficiency Virus Type 1 (HIV-1) (associated with AIDS), Hepatitis C virus (HCV) and Hepatitis B virus (HBV).

"SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST HIV-1, HCV AND HBV ON SURFACES/OBJECTS SOILED WITH BLOOD/BODY FLUIDS."

Personal Protection: Specific barrier protection items to be used when handling items soiled with blood or body fluids are disposable latex gloves, gowns, masks and eye coverings. (*Alternate statement:* Clean up must always be done wearing protective latex gloves, gowns, masks and eye protection.)

Cleaning Procedure: Blood and other body fluids (containing HIV-1, HBV and HCV) must be thoroughly cleaned from surfaces and objects before application of the disinfectant (Q-SAN).

Disposal of Infectious Materials: Blood and other body fluids, cleaning materials and clothing must be autoclaved and disposed of according to federal, state and local regulations for infectious waste disposal.

Contact Time: For HIV, leave surfaces wet for two minutes with a 4-ounce per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) use solution. This contact time will not control other common types of viruses and bacteria. For HBV and HCV, leave surfaces wet for 10 minutes with a 4-ounce per 5 gallons (or equivalent use dilution) (625 ppm active quat) use solution.

SURGICAL INSTRUMENT PRESOAK: Add 4 ounces of Q-SAN to 5 gallons of water (or equivalent use dilution) (625 ppm active quat). Place pre-cleaned instruments in solution to presoak surgical instruments for a minimum of 10 minutes, then proceed with normal sterilization procedure. Prepare a fresh solution at least daily or more often if solution becomes cloudy or soiled.

Note: Plastic instruments can remain immersed until ready to use. Metal instruments must be removed after 10 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle. Sterilization of instruments is required before use. Prolonged soaking can cause damage to metal instruments.

ULTRASONIC BATH DISINFECTANT/FUNGICIDAL DIRECTIONS: Use Q-SAN to disinfect hard, (inanimate) non-porous, non-critical objects compatible with Ultrasonic cleaning units. Pour a fresh solution of 0.8 ounces per gallon of water (or equivalent use dilution) (625 ppm active quat) directly into bath chamber. Pre-clean soiled objects. Place objects into unit and operate for a minimum of 10 minutes, according to manufacturers' use directions. Remove objects and rinse with sterile water (sterile water for injection), or allow to air dry. Replace solution at least daily or when solution becomes visibly dirty or discolored.

FOR DISINFECTING/FUNGICIDAL HARD, NON-POROUS BATH (FIBERGLASS) AND THERAPY EQUIPMENT: To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the unit, drain the water and refill with fresh water to just cover the intake valve. Add 4 ounces of Q-SAN for each 5 gallons of water (0.80 ounces per one gallon) (or equivalent use dilution) (625 ppm active quat) in the unit at this point. Briefly start the pump to circulate the solution. Turn off pump. Wash down the unit sides, seat of the chair lift, and any/all related

equipment with a clean swab, brush or sponge. Treated surfaces must remain wet for 10 minutes for proper disinfection. After the unit has been thoroughly disinfected, drain solutions from the unit and rinse any/all cleaned/disinfected surfaces with fresh water. The unit is ready for reuse.

CLEANING AND DISINFECTING HARD, NON-POROUS SURFACES ON PERSONAL PROTECTIVE EQUIPMENT (RESPIRATORS): Pre-clean equipment if heavily soiled to ensure proper surface contact. Add 4 ounces of Q-SAN to 5 gallons of water (or equivalent use dilution) (625 ppm active quat). Gently mix for uniform solution. Apply solution to hard, non-porous surfaces of the respirator with a brush, coarse spray device, sponge or by immersion. Thoroughly wet all surfaces to be disinfected. Treated surfaces must remain wet for ten (10) minutes. Remove excess solution from equipment prior to storage. The user must comply with all OSHA regulations for cleaning respiratory protection equipment (29 CFR § 1910.134).

SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES IN INSTITUTIONAL FACILITIES

ULTRASONIC BATH SANITIZER DIRECTIONS: Use Q-SAN to sanitize hard, (inanimate) non-porous, non-critical objects compatible with Ultrasonic cleaning units. Pour a fresh solution of ¼ ounce per gallon of water (or equivalent use dilution) (200 ppm active quat) directly into bath chamber. Pre-clean soiled objects. Place objects into unit and operate for a minimum of 3 minutes, according to manufacturers' use directions. Remove objects and rinse with sterile water (sterile water for injection), or allow to air dry. Replace solution at least daily or when solution becomes visibly dirty or discolored.

Note: Q-SAN in its use solution is compatible with stainless steel, aluminum and most other surfaces. Before product use, it is recommended that you apply product to a smaller test area to determine compatibility before proceeding with its use.

FOOD PROCESSING PREMISES

Before use in federally inspected meat and poultry food processing plants and dairies, food products and packaging materials must be removed from room or carefully protected. A potable water rinse is not allowed (Do not rinse) following use of the product as a sanitizer on previously cleaned hard food contact surfaces provided that the surfaces are adequately drained before contact with food so that little or no residue remains.

OR

Before using Q-SAN, food products and packaging materials must be removed from the room or carefully protected. A potable water rinse is not allowed (Do not rinse) following use of the product as a sanitizer on previously cleaned hard surfaces provided that the surfaces are adequately drained (and air-dried) before contact with food so that little or no residue remains. For disinfection, a potable water rinse is required.

DIRECTIONS FOR FOOD PROCESSING PLANTS: For use on non-food contact surfaces such as floors, walls, tables, garbage cans and disposal areas. Before using Q-SAN, food products and packaging materials must be removed from the room or carefully protected. Follow Disinfection directions.

DIRECTIONS FOR FOOD STORAGE AREAS: For use on non-food contact surfaces such as shelves, floors, walls and tables. Before using Q-SAN, food products and packaging materials must be removed from the room or carefully protected. Then follow Disinfection directions.

FOR USE AS A CLEANER/DISINFECTANT IN FOOD PROCESSING PLANTS:

1. Before using Q-SAN in food processing areas, food products and packaging materials must be removed from the room or carefully protected.
2. Apply use solution of 3 ounces of Q-SAN per 5 gallons of water evenly over surface using a brush, cloth, mop, sponge or coarse spray device. Be sure to wet all surfaces thoroughly. Do not breathe spray.
3. Allow product to remain on surface for ten (10) minutes.
4. Wipe with clean cloth, sponge or paper towel.
5. For heavily soiled areas, thoroughly clean surface prior to disinfecting.
6. When disinfecting food contact surfaces used for food preparation, rinse surfaces thoroughly with potable water. Q-SAN must not be used to clean the following surfaces: utensils, glassware, dishes or interior surfaces of processing equipment.

TO DISINFECT FOOD-PROCESSING AND TOBACCO PREMISES: Before using Q-SAN, food products and packaging materials must be removed from area or carefully protected. For use on floors, walls and storage areas, mix 3 ounces of Q-SAN to 5 gallons of water (or equivalent use dilution) (469 ppm active quat). For heavily soiled areas, a pre-cleaning step is required. Apply solution with a brush, mop, cloth, sponge or hand pump trigger spray device so as to wet all surfaces thoroughly. For sprayer applications, use a coarse spray device. Allow surface to remain wet for 10 minutes. Then remove excess liquid. After use, all surfaces in the area must be thoroughly rinsed with potable water.

TO DISINFECT FOOD SERVICE ESTABLISHMENT FOOD CONTACT SURFACES: (For) countertops, exterior surfaces of appliances, (and) tables, add 3 ounces of Q-SAN to 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Before using Q-SAN, food products and packaging materials must be removed from area or carefully protected. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a brush, mop, cloth, sponge or hand pump trigger spray device so as to wet all surfaces thoroughly. For sprayer applications, use a coarse spray device. Allow surface to remain wet for 10 minutes. Then remove excess liquid and rinse the surface with potable water. (Alternate statement: After use, all surfaces in the area must be thoroughly rinsed with potable water.)

FOR USE ON NON-FOOD CONTACT SURFACES AS A GENERAL DISINFECTANT IN THE BREWERY INDUSTRY: Use 3 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Follow the general disinfectant directions above.

DIRECTIONS FOR FOGGING IN DAIRIES, BEVERAGE AND FOOD PROCESSING PLANTS: Prior to fogging, food products and packaging material must be removed from the room or carefully protected. After cleaning, fog desired areas using one quart per 1000 cubic feet of room area with a product solution containing 1.5 ounces product to 1 gallon of water (or equivalent use dilution) (1,200 ppm). Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. Vacate the area of all personnel during fogging and for a minimum of 2 hours after fogging. All food contact surfaces must be sanitized with an EPA approved food contact sanitizer solution of 200 ppm active quaternary (1 ounce of Q-SAN to 4 gallons of water) (or equivalent use dilution) prior to use. Allow food contact surfaces to drain thoroughly before operations are resumed.

Note: The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances must a room or building be entered by anyone within two hours of the actual fogging and a minimum of 4 air exchanges (ACH) per hour in the facility. If the building must be entered, then the individuals entering the building must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long sleeves and long pants.

FOGGING IS TO BE USED AS AN ADJUNCT TO ACCEPTABLE MANUAL CLEANING AND DISINFECTING OF ROOM AND MACHINE SURFACES.

DISINFECTING POTATO STORAGE AREA AND EQUIPMENT: Remove all potatoes prior to disinfection of potato storage area and equipment. Pre-clean hard surfaces by removing heavy soils or gross filth. Follow general disinfecting directions as outlined in that section. All treated surfaces must be thoroughly rinsed with potable water prior to reuse.

FOR CONTROL OF SMALL FLIES ON NON-FOOD CONTACT SURFACES: For control of small flies: *Drosophila* spp. and the Phoridae family. To control flies on non-food contact surfaces such as floors, walls, countertops, metal surfaces, painted surfaces, glazed porcelain, glazed tile, glass, chrome, rubber, and plastic in restaurants, kitchens, dishwashing areas, and bar and wait station areas. Remove food and food packaging prior to use. Cover exposed food-handling surfaces. After removing gross filth, apply a solution of 4 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) to surfaces and locations where flies breed. Spray surfaces thoroughly or apply by pouring, mopping or sponging onto the surface. Repeat application 1-2 times per week or as needed. Do not contaminate food and food packaging.

FOR CONTROL OF SMALL FLIES IN DRAINS: For control of small flies: *Drosophila* spp. and the Phoridae family. Spray or pour solution of 4 ounces per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) into drain during time of lowest level of drain use. Add 14 ounces of solution daily to each drain to maintain fly control. Apply around the edge of the drain and coat all sides of inside of drain.

**SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES
in FOOD PROCESSING FACILITIES**

SHOE (BOOT) BATH SANITIZER DIRECTIONS: To prevent cross contamination from area to area in animal areas, and the packaging and storage areas of food plants, shoe baths containing one inch of freshly made sanitizing solution must be placed at all entrances to buildings, hatcheries and at all the entrances to the production and packaging rooms. Scrape waterproof shoes and place in a ¼ ounce of Q-SAN per gallon of water (or equivalent use dilution) (200 ppm active) solution for 3 minutes prior to entering area. Change the sanitizing solution in the bath at least daily or when solution appears dirty.

SHOE FOAM DIRECTIONS: To prevent cross contamination from area to area in animal areas, and the packaging and storage areas of food plants, apply a foam layer approximately 0.5 to 2 inches thick made from a solution of 1 to 1.5 ounces per gallon of water (or equivalent use dilution) (781 to 1172 ppm active) at all entrances to buildings, hatcheries, production and packaging rooms by using a foam generating machine or aerator to apply foam layer. Follow the foaming directions as specified by the manufacture of the foam generator/aerator. Scrape waterproof shoes. Stand and/or walk through foamed area for 3 minutes prior to entering area. Foam area must be washed and replaced at least daily or when it appears dirty.

(For food processing or other facilities that have installed entryway sanitizing systems)

ENTRYWAY SANITIZING SYSTEMS: To prevent cross contamination from area to area, set the system to deliver (0.51 – 1.02 oz. per gallon of water) (1.5 – 3 oz. per 2 7/8 oz per gallon of water) (or equivalent use dilution) (400 – 800 ppm active) of sanitizing solution. The (spray) (foam) must cover the entire path of the doorway. Set the system so that a continuous wet blanket of sanitizer solution is delivered to the floor.

Do not mix other foam additives to the sanitizing solution.

GLOVE SPRAY SANITIZER DIRECTIONS: To prevent cross contamination from area to area in animals areas and the packaging and storage areas of food plants, spray pre-washed (plastic, latex or other synthetic rubber) gloves with enough freshly made sanitizing solution to cover the gloves. Do not let sanitizing solution come into contact with the exposed skin. Make up the sanitizing solution by adding ¼ ounce of Q-SAN per gallon of water (or equivalent use dilution) (200 ppm active). Apply use solution prior to usage (wearing) using a coarse spray device. Completely cover all glove surfaces with use solution. After applying solution, allow gloves to remain wet for 3 minutes. Let air dry thoroughly before wearing gloves. NO POTABLE WATER RINSE IS ALLOWED. Change the sanitizing solution at least daily or when solution appears dirty.

FOOD PROCESSING PLANTS USING FOGGING DEVICES

For use in dairies, beverage and food processing plants. Prior to fogging, food products and packaging material must be removed from the room or carefully protected. After cleaning, fog desired areas using 1 quart per 1000 cubic feet of room area with a solution containing 1½ ounces of product to 1 gallon of water (or equivalent use dilution) (1,200 ppm). Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. Vacate the area of all personnel during fogging and for a minimum of 2 hours after fogging. All food contact surfaces must be thoroughly rinsed prior to reuse with potable water.

Note: The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances must a room or building be entered by anyone within two hours of the actual fogging and a minimum of 4 air exchanges (ACH) per hour in the facility. If the building must be entered, then the individuals entering the building must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long sleeves and long pants.

FOGGING IS TO BE USED AS AN ADJUNCT TO ACCEPTABLE MANUAL CLEANING AND DISINFECTING OF ROOM AND MACHINE SURFACES.

MUSHROOM FARM INDUSTRY USE DIRECTIONS

Site Preparation: The first step in any on-going sanitation program must be the removal of gross contamination and debris. This may be accomplished by using a shovel, broom, or vacuum, depending on the area to be disinfected.

Disinfection: Use 3 ounces of Q-SAN per 5 gallons of water (0.60 ounces per gallon of water) (or equivalent dilution). Wet all surfaces thoroughly. Treated surfaces must be allowed to remain wet for 10 minutes. Let air-dry. For heavily soiled areas, pre-clean first. Prepare a fresh solution for each use.

For Heavy Duty Cleaning: When greater cleaning is desired, use 6 ounces of Q-SAN per 5 gallons of water (1.2 ounces of Q-SAN per gallon of water) (or equivalent dilution). Heavily soiled areas will require repeated cleaning before treatment.

DO NOT APPLY TO THE MUSHROOM CROP, COMPOST OR CASING. Rinse treated surfaces with potable water before they contact the crop, compost or casing.

FOOD CONTACT AND TOBACCO PROCESSING EQUIPMENT SANITIZING DIRECTIONS

Before use as a sanitizer in federally inspected meat and poultry plants and dairies, food products and packaging materials must be removed from the room or carefully protected. A potable water rinse is not allowed (Do not rinse) following the use of Q-SAN as a sanitizer on previously cleaned hard, non-porous surfaces provided that the surfaces are adequately drained before contact with food so that little or no residue remains.

Prior to application, remove gross food particles and soil by a pre-flush or pre-scrape and when necessary, presoak. Then thoroughly wash or flush objects with a good detergent or compatible cleaner, followed by a potable water rinse before applications of the sanitizing solution.

FOOD CONTACT SANITIZING PERFORMANCE: At 1 ounce per 4 gallons Q-SAN (or equivalent use dilution) (200 ppm active) eliminates 99.999% of the of the following bacteria in 60 seconds in 500 ppm hard water (calculated as CaCO₃) according to the AOAC Germicidal and Detergent Sanitizing Action of Disinfectants test:

- | | |
|---|---|
| <i>Aeromonas hydrophila</i> (ATCC 23213) | <i>Listeria monocytogenes</i> (ATCC 984) |
| <i>Campylobacter jejuni</i> (ATCC 29428) | <i>Shigella dysenteriae</i> (ATCC 9361) |
| <i>Clostridium perfringens</i> (ATCC 13124) | <i>Staphylococcus aureus</i> (ATCC 6538) |
| <i>Enterobacter sakazakii</i> (ATCC 29544) | <i>Streptococcus pyogenes</i> (ATCC 12344) |
| <i>Escherichia coli</i> (ATCC 11229) | <i>Yersinia enterocolitica</i> (ATCC 23715) |
| <i>Enterococcus faecalis</i> Vancomycin resistant (ATCC 5129) | |
| <i>Escherichia coli</i> O157:H7 (ATCC 43888) | <i>Salmonella typhi</i> (ATCC 6539) |
| <i>Escherichia coli</i> O111:H8 (ATCC BAA-184) | |

FOOD CONTACT SANITIZING DILUTION CHART

To prepare a 200, 300 or 400 ppm active quaternary solution, use the following dilution tables. Prepare correct dilution rate based upon the appropriate use site.

PUBLIC EATING PLACES, DAIRY PROCESSING EQUIPMENT AND FOOD PROCESSING EQUIPMENT AND UTENSILS SANITIZING DILUTION CHART

Active quat solution	1 gallon	4 gallons	10 gallons	20 gallons
200 ppm	¼ ounce	1.0 ounce	2 ½ ounces	5.0 ounces

FOOD PROCESSING EQUIPMENT AND UTENSILS SANITIZING DILUTION CHART

Active quat solution	1 gallon	4 gallons	10 gallons	20 gallons
200 ppm	¼ ounce	1.0 ounce	2 ½ ounces	5.0 ounces
300 ppm	0.375 ounces	1 ½ ounces	3 ¾ ounces	7 ½ ounces
400 ppm	½ ounce	2.0 ounces	5.0 ounces	10.0 ounces

SANITIZATION: When used for sanitization of previously cleaned food equipment or food contact items limit active quaternaries – to 200-400 ppm. At this level NO POTABLE WATER RINSE is allowed.

Q-SAN is an effective sanitizer when diluted in water up to 300 ppm hardness (CaCO₃). To sanitize previously cleaned and rinsed non-porous food contact surfaces, prepare 200-400 ppm active quaternary solution by adding 1 to 2 oz. of Q-SAN to 4 gallons of water.

TO SANITIZE IMMOBILE ITEMS (such as tanks, chopping blocks, countertops, refrigerated storage and display equipment and food processing equipment): Flood the area with appropriate ppm Q-SAN solution for at least 1 minute (60 seconds), making sure to wet all surfaces completely. Remove excess, drain the use-solution from the surface and air dry. No potable water rinse is allowed.

TO SANITIZE MOBILE ITEMS (such as drinking glasses and eating utensils): Immerse in 200 ppm Q-SAN solution for at least 1 minute (60 seconds), making sure to immerse completely. Remove items, drain the use-solution from the surface and air dry. Prepare a fresh solution at least daily or more frequently as soil is apparent. No potable water rinse is allowed.

SANITIZING OF FOOD PROCESSING EQUIPMENT AND OTHER HARD SURFACES IN FOOD PROCESSING LOCATIONS, DAIRIES, RESTAURANTS AND BARS DIRECTIONS: For sanitizing food processing equipment, dairy equipment, food

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utensils, dishes, silverware, eating utensils, glasses, sink tops, countertops, refrigerated storage and display equipment and other hard, non-porous surfaces. NO POTABLE WATER RINSE IS ALLOWED.

Prior to application, remove gross food particles and soil by a pre-flush or pre-scrape and when necessary, presoak. Then thoroughly wash or flush objects with a good detergent or compatible cleaner, followed by a potable water rinse before applications of the sanitizing solution.

Before use as a sanitizer in federally inspected meat and poultry plants and dairies, food products and packaging materials must be removed from the room or carefully protected. A potable water rinse is not allowed (Do not rinse) following the use of Q-SAN as a sanitizer on previously cleaned hard, non-porous surfaces provided that the surfaces are adequately drained before contact with food so that little or no residue remains.

Apply to sink tops, countertops, refrigerated storage and display equipment, and other stationary hard surfaces by cloth or brush or mechanical spray device. NO POTABLE WATER RINSE IS ALLOWED (after use as a sanitizer).

Dishes, silverware, glasses, cooking utensils, eating utensils and other similar size food processing equipment can be sanitized by immersion in a 1 ounce per 4 gallons solution of Q-SAN (or equivalent use dilution) (200 ppm active) with a 1 minute contact time. NO POTABLE WATER RINSE IS ALLOWED.

Prepare a fresh solution at least daily or when use solution becomes visibly dirty. For mechanical application use solution may not be reused for sanitizing applications.

PUBLIC EATING PLACES/DAIRY PROCESSING

FOR PUBLIC EATING PLACES, DAIRY PROCESSING EQUIPMENT AND FOOD PROCESSING EQUIPMENT AND UTENSILS: Prior to application, remove gross food particles and soil by a pre-flush, or pre-scrape, and when necessary, presoak. Then thoroughly wash or flush objects with a compatible detergent followed by a potable water rinse before application of sanitizing solutions. Apply a solution of 1 ounce of Q-SAN in 4 gallons of water (or equivalent use dilution) (200 ppm active) OR mix (one) 1-ounce packet with 4 gallons of water to pre-cleaned, hard surfaces, thoroughly wetting surfaces with a brush, cloth, mop, sponge, sprayer or by immersion. For spray applications, use a coarse pump or trigger spray device. Spray 6 to 8 inches from surface. Rub with brush, sponge, or cloth. Do not breathe spray. With spray applications cover or remove all food products. From a Closed Loop Dilution Center, apply 200 ppm active solution to the surface to be sanitized. Surfaces must remain wet for at least 1 minute followed by adequate draining and air drying. A fresh solution must be prepared at least daily or when use solution becomes visibly dirty. For mechanical application Use solution may not be reused for sanitizing applications. NO POTABLE WATER RINSE IS ALLOWED (after use as a sanitizer) (after application of the sanitizing solution).

DIRECTIONS FOR SANITIZING FOOD CONTACT SURFACES IN PUBLIC EATING PLACES, DAIRY PROCESSING EQUIPMENT AND FOOD PROCESSING EQUIPMENT, UTENSILS, AND FOOD CONTACT ARTICLES AS REGULATED BY 40CFR sec 180.940(a):

1. Scrape, flush or presoak articles (whether mobile or stationary) to remove gross food particles and soil.
2. Thoroughly wash articles with an appropriate detergent or cleaner.
3. Rinse articles thoroughly with potable water.
4. Sanitize articles using a solution of ¼ ounce of Q-SAN per gallon of water (or equivalent use dilution) (200 ppm active). Articles that can be immersed in solution

must remain in solution for 60 seconds. Articles too large for immersing must be thoroughly wetted by rinsing, spraying or swabbing.

5. Remove immersed items from solution. Thoroughly drain and then air dry. Thoroughly drain non-immersed items and air dry. No potable rinse allowed. (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

U.S. PUBLIC HEALTH SERVICE FOOD SERVICE SANITIZATION RECOMMENDATIONS CLEANING AND SANITIZING

Equipment and utensils shall be thoroughly preflushed or prescraped, and when necessary, presoaked to remove gross food particles and soil.

1. Thoroughly wash equipment and utensils in a hot detergent solution. Rinse utensils and equipment thoroughly with potable water.
2. Sanitize equipment and utensils by immersion in 1 ounce of Q-SAN per 4 gallons of water (solution) (or equivalent use dilution) for at least 60 seconds at a temperature of 75°F. This dilution is equivalent to a solution containing 50 ppm available chlorine.
3. For equipment and utensils too large to sanitize by immersion, apply use solution of 0.5 ounce of Q-SAN per 2 gallons of water (200 ppm active) (or equivalent use dilution) by rinsing, spraying or swabbing until thoroughly wetted.
4. Allow sanitized surfaces to drain and air dry. Do not rinse.

WISCONSIN STATE DIVISION OF HEALTH

DIRECTIONS FOR EATING ESTABLISHMENTS *(Not applicable in CA)*

1. Scrape and pre-wash utensils and glasses whenever possible.
2. Wash with a good detergent or compatible cleaner.
3. Rinse with potable water.
4. Sanitize in a solution of 1 ounce of Q-SAN per 4 gallons water (200 ppm active quaternary) (or equivalent use dilution). Immerse all utensils for at least two minutes or for contact time specified by governing sanitary code.
5. Place sanitized utensils on a rack or drain board to air-dry.
6. Prepare fresh sanitizing solution at least daily or more often when visibly soiled or diluted.

Note: A clean potable water rinse following sanitization is not permitted under Section HSS 196.13 of the Wisconsin Administrative Code.

(Alternative language for clean in place, closed loop dilution centers.)

WISCONSIN STATE DIVISION OF HEALTH

DIRECTIONS FOR EATING ESTABLISHMENTS *(Not applicable in CA)*

1. Scrape and pre-wash utensils and glasses whenever possible.
2. Wash with a good detergent or compatible cleaner.
3. Rinse with potable water.
4. Sanitize in a solution from the Closed Loop Dilution Center (200 ppm active quaternary). Immerse all utensils for at least two minutes or for contact time specified by governing sanitary code.
5. Place sanitized utensils on a rack or drain board to air-dry.
6. Prepare fresh sanitizing solution at least daily or more often when visibly soiled or diluted.

Note: A clean potable water rinse following sanitization is not permitted under Section HSS 196.13 of the Wisconsin Administrative Code.

DIRECTIONS FOR RESTAURANT AND BAR SANITIZER

Equipment and utensils must be thoroughly preflushed or prescraped and, when necessary, presoaked to remove gross food particles and soil. Then thoroughly wash or

flush objects with a good detergent or compatible cleaner followed by a potable water rinse before application of the sanitizing solution.

For precleaned dishes, glassware, silverware, eating utensils and cooking utensils, immerse in a solution containing 1 ounce of Q-SAN per 4 gallons of water (or equivalent use dilution) (200 ppm active quaternary). Allow surface to remain wet for at least 60 seconds. Drain thoroughly before reuse. No potable water rinse is allowed.

(Alternative language for clean in place, closed loop dilution centers.)

FOR USE AS A SANITIZER ON DISHES, GLASSWARE, SILVERWARE, EATING UTENSILS, COOKING UTENSILS: Remove gross food particles by preflush, prescrape, and presoak when necessary. Wash thoroughly with detergent or compatible cleaner then rinse with potable water prior to application of Q-SAN. Then immerse in a sanitizing solution from Closed Loop Dilution Center (200 ppm active quaternary). Allow surface to remain wet for at least 60 seconds. Drain thoroughly and air dry before reuse. No potable water rinse is allowed.

SANITIZING OF FOOD PROCESSING EQUIPMENT (ICE MACHINES) AND OTHER HARD SURFACES IN FOOD CONTACT LOCATIONS: For sanitizing food processing equipment, dairy equipment, refrigerated storage and display equipment, and other hard, non-porous surfaces. Equipment and utensils must be thoroughly preflushed or prescraped and, when necessary, presoaked to remove gross food particles.

1. Turn off refrigeration.
2. Unit must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Wash and rinse all surfaces thoroughly.
4. Apply a solution of 1 ounce Q-SAN in 4 gallons of water (or equivalent use dilution) (200 ppm active) by mechanical spray, direct pouring or by recirculating through the system. Surfaces must remain wet for at least one minute followed by complete draining and drying. Fresh solution must be prepared for each cleaning.
5. No potable water rinse is allowed when product is used as directed.
6. Return machine to service.

SANITIZATION OF INTERIOR HARD, NON-POROUS SURFACES OF WATER SOFTENERS AND REVERSE OSMOSIS (RO) UNITS

Water Softeners – Sanitization must occur after initial installation, after the system is serviced and periodically during its use.

1. Tank must be washed with a compatible detergent and rinsed with potable water before sanitizing. *(Alternate statement: Unit must be washed with a compatible detergent and rinsed with potable water before sanitizing.)*
2. Backwash the softener and add 2 ounces of sanitizer per 8 gallons of water (or equivalent use dilution) (200 ppm active) to the brine tank well. (The brine tank must have water in it to permit the solution to be carried into the softener.) (NOTE: Standard system capacity is 48 gallons.)
3. Proceed with the normal regeneration or interrupt the cycle after the brining step and let the softener soak for a minimum of 60 seconds.
4. Backwash the softener with potable water to make sure all sanitizing solution is thoroughly rinsed from the unit before returning the system to service. Return system to service.

Reverse Osmosis (RO) Units – Sanitization must occur after initial installation, after the system is serviced and periodically during its use.

1. Turn off RO system, drain storage tank and remove membrane element and pre-filters. Put membrane element in a plastic bag so it remains wet. Do not use Q-SAN to sanitize the membrane element. Membrane element must be sterilized separately.

2. Unit must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Fill empty pre-filter housing with 2 ounces of sanitizer per 8 gallons of water (or equivalent use dilution) (200 ppm active) and turn on raw water. (NOTE: Standard system capacity is 1 to 2 gallons).
4. After holding tank is full, let system stand idle for a minimum of 60 seconds. Turn off water. Drain holding tank.
5. Before the system is put back into service, flush system with potable water to assure sanitizing solution is rinsed thoroughly from system. Return unit(s) to normal operation. NO POTABLE WATER RINSE IS ALLOWED. Follow the manufacturer's directions for re-installation of new pre-filters, membrane element and post filter.

SANITIZATION OF INTERIOR HARD, NON-POROUS SURFACES OF ICE MACHINES, WATER COOLERS, WATER HOLDING TANKS AND PRESSURE TANKS

Ice Machines – Sanitization must occur after initial installation, after the machine is serviced and periodically during its use.

1. Shut off incoming water line to machine.
2. Unit must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Prepare a solution of 2 ounces of sanitizer per 8 gallons of water (or equivalent use dilution) (200 ppm active).
4. Circulate solution through machine making sure to wet all surfaces and allow a minimum contact of 60 seconds.
5. Drain and completely flush machine twice with potable water.
6. Return machine to normal operation.

Water Coolers, Water Holding Tanks and Pressure Tanks – Sanitization must occur after initial installation, after the system is serviced and periodically during its use.

1. Shut off incoming water line.
2. Units/tanks must be washed with a compatible detergent and rinsed with potable water before sanitizing.
3. Prepare a solution of 2 ounces of sanitizer per 8 gallons of water (or equivalent use dilution) (200 ppm active).
4. Apply or circulate (if possible) to wet all surfaces and allow a minimum contact of 60 seconds.
5. Drain and completely flush system twice with potable water.
6. Return to service by opening incoming water lines.

FOOD PROCESSING EQUIPMENT AND UTENSILS

At 1 ounce per 4 gallons this sanitizer fulfills the criteria of Appendix F of the Grade A Pasteurized Milk, Ordinance 1978 Recommendations of the U.S. Public Health Services in waters up to 500 ppm of hardness calculated as CaCO₃ when evaluated by the AOAC Germicidal and Detergent Sanitizer Method against Escherichia coli and Staphylococcus aureus.

FOR FOOD PROCESSING EQUIPMENT AND UTENSILS IN FOOD PROCESSING FACILITIES: Prior to application, remove gross food particles and soil by pre-flush, or pre-scrape, and when necessary, pre-soak. Then thoroughly wash or flush objects with a compatible detergent followed by a potable water rinse before application of sanitizing solutions. Apply a solution of 1 to 2 ounce(s) of Q-SAN in 4 gallons of water (or equivalent use dilution) (200-400 ppm active) to pre-cleaned, hard, non-porous surfaces thoroughly wetting surfaces with a brush, cloth, mop, sponge, sprayer or by immersion. For spray applications, use a coarse pump or trigger spray device. Spray 6 to 8 inches from surface. Rub with brush, sponge, or cloth. Do not breathe spray. With spray

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applications cover or remove all food products. From a Closed Loop Dilution Center, apply 200-400 ppm active solution to the surface to be sanitized. Surfaces must remain wet for at least 1 minute followed by adequate draining (and air drying). (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food). Prepare a fresh solution at least daily or when use solution becomes visibly dirty. For mechanical application use solution may not be reused for sanitizing applications. **NO POTABLE WATER RINSE IS ALLOWED (DO NOT RINSE) AFTER APPLICATION OF THE SANITIZING SOLUTION** (after use as a sanitizer).

(OR)

DIRECTIONS FOR FOOD PROCESSING EQUIPMENT AND UTENSILS (AS REGULATED BY) (40CFR sec 180.940(c))

Equipment and utensils must be thoroughly preflushed or prescraped and, when necessary, presoaked to remove gross food particles. Clean and rinse equipment thoroughly. Then apply sanitizing solution containing 1 to 2 ounce(s) of Q-SAN per 4 gallons of water (or equivalent use dilution) (200-400 ppm active quaternary). Allow surfaces to remain wet for at least 60 seconds. Prepare a fresh solution at least daily or when use solution becomes visibly dirty. For mechanical operation, use solution may not be reused for sanitizing applications. No potable water rinse is allowed (Do not rinse). (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

(OR)

DIRECTIONS FOR SANITIZING FOOD CONTACT SURFACES IN FOOD PROCESSING EQUIPMENT AND UTENSILS, AS REGULATED BY 40CFR sec 180.940(c):

1. Scrape, flush or presoak articles (whether mobile or stationary) to remove gross food particles and soil.
2. Thoroughly wash articles with an appropriate detergent or cleaner.
3. Rinse articles thoroughly with potable water.
3. Sanitize articles using a solution of ¼ to ½ ounce of Q-SAN per gallon of water (or equivalent use dilution) (200 to 400 ppm active). Articles that can be immersed in solution must remain in solution for 60 seconds. Articles too large for immersing must be thoroughly wetted by rinsing, spraying or swabbing.
4. Remove immersed and non-immersed items from solution to (and) make certain all surfaces are adequately drained before contact with food. No potable water rinse is allowed. (Do not rinse). (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

DIRECTIONS FOR FOOD PROCESSING EQUIPMENT AND DAIRIES

Equipment and utensils must be thoroughly preflushed or prescraped and, when necessary, presoaked to remove gross food particles. Clean and rinse equipment thoroughly. Then apply sanitizing solution containing 1 ounce of Q-SAN per 4 gallons of water (or equivalent use dilution) (200 ppm active quaternary). Apply solution to pre-cleaned, hard, non-porous surfaces thoroughly wetting surfaces with a brush, cloth, mop, sponge, sprayer or by immersion. For spray applications, use a coarse pump or trigger spray device. Spray 6-8 inches from surface. Rub with brush, sponge, or cloth. Do not breathe spray. With spray applications, cover or remove all food products. Allow surfaces to remain wet for at least 60 seconds. Drain thoroughly and allow surface to air dry before reuse. Prepare a fresh solution at least daily or when use solution becomes visibly dirty. For mechanical operation, use solution may not be reused for sanitizing applications. No potable water rinse is allowed after application of the sanitizing solution.

BEVERAGE DISPENSING EQUIPMENT SANITIZER DIRECTIONS

For sanitizing of bottling or pre-mix dispensing equipment, after cleaning thoroughly rinse equipment with a potable water rinse. Fill equipment with a solution of 1 to 2

ounces of Q-SAN per 4 gallons of water (or equivalent use dilution) (200 - 400 ppm active). Allow solution to remain in equipment for at least 60 seconds, or until operations resume at which time the sanitizing solution must be drained from the system. To insure the removal of flavors, it is suggested that during changeover between products the system must be cleaned, rinsed and flushed with the sanitizing solution for at least 1 minute. Drain thoroughly and allow surface to air dry before reuse. No potable water rinse is allowed. (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

SANITARY FILLING EQUIPMENT SANITIZER DIRECTIONS

For use in sanitizing bottles or cans in the final rinse application. The product is to be proportioned into the final rinse water line of the container washer or rinser in the concentration of 200 - 400 ppm active quat. Prepare a solution of 1 to 2 ounces of Q-SAN per 4 gallons of water (or equivalent use dilution) (200 - 400 ppm active) for the exterior application for the filler and closing machine. Allow surfaces to remain wet for at least 60 seconds. Drain thoroughly and allow surface to air dry before reuse. No potable water rinse is allowed. (Alternate statement: Allow sanitized surfaces to adequately drain before contact with food).

STORAGE TANK SANITIZER DIRECTIONS

For sanitizing beer fermentation and holding tanks, citrus and food processing storage, and holding tanks. Remove gross filth and soil by pre-flush or pre-scrape and when necessary presoak. Then wash surfaces with a compatible detergent and rinse with potable water prior to sanitizing. Prepare a solution of 1 to 2 ounces of Q-SAN per 4 gallons of water (or equivalent use dilution) (200 - 400 ppm active) for mechanical or automated systems. Allow surfaces to remain wet for at least 60 seconds. Drain thoroughly before reuse. No potable water rinse is allowed.

For mechanical operations or automated systems, the used sanitizing solution may not be used for sanitizing, but may be reused for other purposes such as cleaning.

SANITIZING EGG SHELLS INTENDED FOR FOOD DIRECTIONS

To sanitize previously cleaned food-grade eggs in shell egg and egg product processing plants, spray with a solution of 1 ounce of Q-SAN per 4 gallons of warm water (or equivalent use dilution) (200 ppm active). The solution must be warmer than the eggs, but not to exceed 130°F. Wet eggs thoroughly and allow to drain. Eggs sanitized with Q-SAN must be subjected to a potable water rinse only if they are to be broken immediately for use in the manufacture of egg products. Eggs must be reasonably dry before casing or breaking. The solution must not be re-used for sanitizing eggs.

Note: Only clean, whole eggs can be sanitized. Dirty, cracked or punctured eggs cannot be sanitized.

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

Remove gross food particles and excess soil by a pre-flush or pre-scrape. Wash with a good detergent or compatible cleaner. Rinse equipment thoroughly with potable water. Then rinse equipment with a sanitizing solution. To sanitize the belt apply Q-SAN at a 200-400 ppm quat level (1 to 2 ounces per 4 gallons) (or equivalent use dilution) to conveyors with suitable feeding equipment. Controlled volumes of sanitizer are applied to 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 operation, apply coarse spray to equipment, peelers, collators, slicers and saws with Q-SAN at a dilution of 200-400 ppm active quat. Conveyor equipment must be free of product when applying this coarse spray. Do not allow this solution to be sprayed directly on food.

FOR SANITIZING IN FISHERIES, MILK, CITRUS, WINE, POTATO & ICE CREAM and BEVERAGE PROCESSING PLANTS: For use as a sanitizer on conveyor belts, follow the "For Treatment of Meat and Poultry or Fruit and Vegetable Conveyors" directions. For directions to reduce or eliminate odors on the equipment in the processing area, follow the "Food Processing Equipment" directions. Also, for directions for reducing bacteria associated with condensation on equipment and pipes, follow directions for "Sanitizing Filling Equipment Sanitizer Directions".

GLOVE DIP SANITIZER DIRECTIONS: To prevent cross contamination from area to area in animal areas and the 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. Do not let sanitizing solution come into contact with the exposed skin. Make up the sanitizing solution by adding ¼ ounce of Q-SAN per gallon of water (or equivalent use dilution) (200 ppm active). Dip (Soak) in solution for 1 minute. **NO POTABLE WATER RINSE IS ALLOWED.** Change the sanitizing solution in the bath at least daily or when solution appears dirty. **Do not let sanitizing solution come into contact with exposed skin.**

ANIMAL PREMISES

ANIMAL PREMISE VIRUCIDAL PERFORMANCE: At 4 ounces per 5 gallons use level (or equivalent use dilution) (625 ppm active quat), Q-SAN was evaluated in the presence of 5% serum with a 10 minute contact time and found to be effective against the following viruses on hard, non-porous environmental surfaces:

- Avian influenza A H9N2/Turkey/Wisconsin virus (ATCC VR-798)
- Avian Influenza A (H5N1) virus
- Avian Reovirus (ATCC VR-2449)
- Bovine Viral Diarrhea Virus (ATCC VR-534)
- Canine Coronavirus (ATCC VR-809)
- Canine Distemper Virus
- Equine Arteritis virus (ATCC VR-796)
- Infectious Bovine Rhinotracheitis virus (IBR)
- Infectious Laryngotracheitis Virus
- Newcastle disease virus
- Porcine Respiratory & Reproductive Virus (PRRSV)
- Porcine Rotavirus (ATCC VR-893)
- Pseudorabies virus (ATCC VR-135)
- Transmissible Gastroenteritis (TGE) Virus

SITE PREPARATION: The first step in any on-going sanitation program must be the removal of gross contamination and debris. This can be accomplished using a shovel, broom, or vacuum depending on the area to be disinfected. The efficacy of even the most efficient germicidal cleaner is reduced in the presence of heavy organic matter. Once the heavy debris is eliminated thoroughly clean all surfaces with soap or detergent and rinse with water.

APPLICATION: Remove all animals and feeds from (premises) (areas to be treated), vehicles (trucks, cars), and enclosures (coops, crates, kennels, stables). Remove all litter, droppings and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other surfaces of facilities and fixtures occupied or traversed by poultry or other animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with disinfecting or virucidal solution for a period of 10 minutes. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure. Ventilate buildings, coops and other closed spaces. Do not house animals or employ equipment

until treatment has been absorbed, set or dried. Thoroughly scrub all treated feed racks, troughs, automatic feeders, fountains and waterers and other equipment which can contact food or water with soap or detergent, and rinse with potable water before reuse.

VETERINARY CLINICS/ANIMAL LIFE SCIENCE LABORATORY/ANIMAL CARE FACILITIES/ANIMAL RESEARCH CENTERS/ANIMAL LABORATORY/ANIMAL QUARANTINE AREAS/ANIMAL BREEDING FACILITIES/ZOOS/PET SHOP/ANIMAL HUSBANDRY/KENNELS/BREEDING AND GROOMING ESTABLISHMENTS/TACK SHOPS DISINFECTION DIRECTIONS: For cleaning and disinfecting the following hard, non-porous surfaces: equipment, utensils, instruments, cages, kennels, stables, stalls and catteries. Remove all animals and feeds from (premises) (areas to be treated), animal transportation vehicles, crates etc. Remove all litter, droppings and manure from floors, walls and surfaces of facilities occupied or traversed by animals. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use solution of 4 ounces per 5 gallons of water (or equivalent dilution) (625 ppm active quat) for a period of 10 minutes. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals as well as forks, shovels, scrapers used in removing litter and manure. Ventilate buildings and other closed spaces. Do not house animals or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub all treated feed racks, automatic feeders, waterers, and other equipment which dispenses food or water with soap or detergent, and rinse with potable water before reuse.

RENDERING PLANT/DRESSING PLANT DISINFECTANT DIRECTIONS (DRESSING PLANT AND RENDERING PLANT DISINFECTANT DIRECTIONS): Cover or remove all food and packaging material before disinfection. Remove gross soils. Disinfect walls and floors in poultry and animal dressing plants with a solution of 3 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Surfaces must remain wet for 10 minutes then thoroughly rinsed with potable water before operations are resumed. Disinfect all rooms, exterior walls and loading platforms of dressing plants. Rinse all surfaces which contact food with potable water before reuse.

RENDERING PLANT/DRESSING PLANT DISINFECTANT/FUNGICIDE/VIRUCIDE DIRECTIONS (DRESSING PLANT AND RENDERING PLANT DISINFECTANT - FUNGICIDE - VIRUCIDE DIRECTIONS): Cover or remove all food packaging material before disinfection. Remove gross soils. Apply to walls and floors in poultry and animal dressing plants with a solution of 4 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) (625 ppm active quat). Surfaces must remain wet for 10 minutes then thoroughly rinsed with potable water before operations are resumed. Disinfect all rooms, exterior walls and loading platforms of dressing plants. Rinse all surfaces which contact food with potable water before reuse.

TERRARIUM AND SMALL ANIMAL CAGE AND CAGE FURNITURE DISINFECTION: Animals frequently defecate on hot rocks and other hard non-porous cage furniture items inside your terrarium. This can result in high bacteria and ammonia levels that can lead to possible infection/disease in your animals. When used regularly Q-SAN can eliminate these high bacteria/ammonia levels in your cage and on your cage furniture items. (Use on rocks and driftwood not allowed for use in California.)

1. Remove all animals.
2. Thoroughly clean all surfaces and objects (hot rocks, caves, cage furniture, feeding and watering dishes, and appliances) including the substrate in the terrarium or cage with soap or detergent and rinse with water.
3. Saturate all surfaces (floors, walls, cages and other washable hard, non-porous environmental surfaces) with the disinfecting and virucidal solution of 4 ounces per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) for a period of

10 minutes. For smaller surfaces, use a trigger spray bottle to spray all surfaces with solution until wet. Then wipe surfaces dry.

4. Saturate gravel as above and let stand for 10 minutes. Place in bucket of clean water and swirl for 15-30 seconds. Thoroughly air dry before returning to terrarium.
5. Do not return animals to the habitat until it is dry and ventilated.
6. Thoroughly scrub all treated surfaces with soap or detergent and rinse with potable water before reuse.
7. Clean terrarium at least once weekly or more as needed.

Note: Do not apply Q-SAN directly onto the small animal. If Q-SAN comes into contact with the small animal's skin, then immediately wash the material off of the animal with lukewarm water. If the small animal ingests Q-SAN, contact your veterinarian immediately. Substrates for desert terrariums (i.e. gravel) must be completely dry before returning to terrarium to avoid high humidity levels. Always replace substrate if a foul odor persists.

REPTILE TANK CLEANING AND DISINFECTION DIRECTIONS: Remove all reptiles from the enclosure (tank) prior to cleaning and disinfecting. Remove all litter or drippings from surfaces. Empty all equipment used for feeding or watering reptiles. Thoroughly clean all surfaces with soap or detergent and rinse with water. Apply the disinfecting and virucidal solution (4 oz. per 5 gallons of water) (or equivalent dilution) (625 ppm active quat) to the surfaces of the enclosure (tank) until thoroughly wet. Allow surfaces to remain wet for 10 minutes. Wipe dry. Rinse all surfaces that come in contact with food with potable water before reuse. Allow the enclosure (tank) to ventilate for a minimum of 10-15 minutes before replacing the reptiles.

Note: Do not apply Q-SAN directly onto the reptile. If Q-SAN comes into contact with the reptile's skin, then immediately wash the material off of the animal with lukewarm water. If the reptile ingests Q-SAN, contact your veterinarian immediately.

FARM PREMISE DISINFECTION DIRECTIONS

FARM PREMISE DISINFECTION DIRECTIONS: Do not use in milking stalls, milking parlors or milk houses. Remove all animals and feed from (premises) (areas to be treated), vehicles and enclosures. Remove all litter and manure from floors, walls and surfaces of barns, pens, stalls, stables, chutes and other facilities and fixtures occupied or traversed by animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate all surfaces with (Use) (Apply) 4 oz per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) and allow surface to remain wet for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels and scrapers used in removing litter and manure. Ventilate buildings, cars, trucks, boats 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.

(OR)

FOR USE IN EQUINE, DAIRY AND HOG FARMS:

1. Remove all animals and feed from (premises) (areas to be treated), vehicles and enclosures.
2. Remove all litter and manure from floors, walls and surfaces of barn, pens, stalls, stables, chutes and other facilities and fixtures occupied or traversed by animals.
3. Empty all troughs, racks and other feeding and watering appliances.
4. Thoroughly clean all surfaces with soap or detergent and rinse with water.
5. Saturate all surfaces with 4 oz per 5 gallons of water (625 ppm active quat) (or equivalent use dilution) use solution for a period of 10 minutes.

6. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels, scrapers used in removing litter and manure.
7. Ventilate buildings, cars, trucks, boats and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed, set and dried.
8. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse.

VEAL, CALVING, HOG, CATTLE AND HORSE OPERATIONS: Between depopulations of facilities, cleaning and disinfection of pens, hutches, aisles and other environmental surfaces can be required. Empty all troughs, racks and other feeding and watering appliances. Flush soils from these areas. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate all surfaces with the disinfecting and virucidal solution (4 oz. per 5 gallons of water) (or equivalent dilution) (625 ppm active quat) and allow to remain wet for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels and scrapers used in removing litter and manure. Ventilate buildings, cars, trucks, boats 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.

FOR USE IN THE TREATMENT OF ANIMAL HOUSING FACILITIES:

1. Remove all animals and feed from (premises) (areas to be treated), vehicles and enclosures.
2. Remove all litter and manure from floors, walls and surfaces of barn, pens, stalls, stables, chutes and other facilities and fixtures occupied or traversed by animals.
3. Empty all troughs, racks and other feeding and watering appliances.
4. Thoroughly clean all surfaces with soap or detergent and rinse with water.
5. Saturate all surfaces (floors, walls, cages and other washable hard, non-porous environmental surfaces) with the disinfecting and virucidal solution of 4 ounces per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) for a period of 10 minutes. For smaller surfaces, use a trigger spray bottle to spray all surfaces with solution until wet.
6. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels, scrapers used in removing litter and manure.
7. Ventilate buildings, cars, trucks, boats and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed, set and dried.
8. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse.

POULTRY (AND SWINE) PREMISE SANITATION SITE PREPARATION

SITE PREPARATION: The first step in any on-going sanitation program must be the removal of gross contamination and debris. This can be accomplished using a shovel, broom, or vacuum depending on the area to be disinfected. The efficacy of even the most efficient germicidal cleaner is reduced in the presence of heavy organic matter. Once the heavy debris is eliminated thoroughly clean all surfaces with soap or detergent and rinse with water.

APPLICATION AND USE DILUTION FOR POULTRY/TURKEY/SWINE PREMISE, ANIMAL QUARTERS AND KENNELS: Remove all animals and feeds from (premises) (areas to be treated), vehicles (trucks and cars), and enclosures (coops, crates,

kennels). Remove all litter, droppings and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities and other fixtures occupied or traversed by animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Use 4 ounces of (Q-SAN) per 5 gallons of water (or equivalent use dilution) (625 ppm active quat). Saturate surfaces with the disinfecting solution for a period of 10 minutes. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure. After application, ventilate buildings, coops and other closed spaces. Do not house poultry or other animals or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub all treated feed racks, troughs, automatic feeders, fountains and waterers, and other equipment which may contact food or water with soap or detergent, and, rinse with potable water before reuse.

OR

DISINFECTANT OF POULTRY/TURKEY EQUIPMENT, SWINE QUARTERS, LIVESTOCK FARMS, EQUINE QUARTERS, ANIMAL QUARTERS AND KENNELS:

Prior to disinfection, remove all poultry, other poultry, other animals and their feed from premises, vehicles (trucks and cars), and enclosures (coops and crates, kennels, stables). Remove all litter, droppings and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other surfaces of facilities and fixtures occupied or traversed by poultry or other animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Use 3 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Saturate surfaces with the disinfecting solution for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure.

After disinfection, ventilate buildings, coops and other closed spaces. Do not house poultry, or other animals or employ equipment until treatment has been absorbed, set or dried.

All treated equipment that will contact feed or drinking water (racks, troughs, automatic feeders, fountains and waterers) must be thoroughly scrubbed with soap or detergent then rinsed with potable water before reuse.

DISINFECTANT/FUNGICIDE/VIRUCIDE OF POULTRY/TURKEY EQUIPMENT, SWINE QUARTERS, LIVESTOCK FARMS, EQUINE QUARTERS, ANIMAL QUARTERS AND KENNELS DIRECTIONS: Prior to use, remove all poultry, other animals and their feeds from (premises) (areas to be treated), vehicles (trucks and cars) and enclosures (coops, crates, kennels, stables). Remove all litter, droppings and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other surfaces of facilities and fixtures occupied or traversed by poultry or other animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Use 4 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) (625 ppm active quat). Saturate surfaces with the disinfecting solution for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure. After application, ventilate buildings, coops and other closed spaces. Do not house poultry or other animals or employ equipment until treatment has been absorbed, set or dried. All treated equipment that will contact feed or drinking water (racks, troughs, automatic feeders, fountains and waterers) must be thoroughly scrubbed with soap or detergent, then rinsed with potable water before reuse.

HATCHERIES: For general disinfection, use 3 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution). For disinfection/fungicide/virucide, use 4 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) (625 ppm active quat). Apply to hatching, setters, trays, racks, egg flats, walls, floors, ceilings, chickboxes, egg cases, trash containers, carts, sexing tables, delivery trucks, vans and other hard surfaces. Leave all treated surfaces (exposed to solution) (wet) for 10 minutes or more. Rinse surfaces with potable water before reuse. Allow surface to air dry.

VEHICLES: Clean all vehicles including mats, crates, cabs, and wheels with high-pressure water and Q-SAN. For sprayer applications, use a coarse spray. Use 3 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) for general disinfection. Use 4 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) for disinfection/fungicide/virucide. Leave all treated surfaces exposed to solution for 10 minutes or more and allow to air dry. (*Note to reviewer: Only one use dilution will be used in this section.*)

FOR USE IN LIVESTOCK, POULTRY AND TURKEY HOUSES:

1. Remove all animals and feed from (premises) (areas to be treated), vehicles and enclosures.
2. Remove all litter and manure from floors, walls and surfaces of barn, pens, stalls, stables, chutes and other facilities and fixtures occupied or traversed by animals.
3. Empty all troughs, racks and other feeding and watering appliances.
4. Thoroughly clean all surfaces with soap or detergent and rinse with water.
5. Saturate all surfaces with (Use) (Apply) 4 oz per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) for a period of 10 minutes.
6. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels, scrapers used in removing litter and manure.
7. Ventilate buildings, cars, trucks, boats and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed, set and dried.
8. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse.

DISINFECTANT DIRECTIONS FOR CHICK VANS, EGG TRUCKS HATCHERY and FARM VEHICLES: Clean all vehicles including mats, crates, cabs, and wheels with high-pressure water and Q-SAN. Use 4 oz. per 5 gallons of water (or equivalent dilution) (625 ppm active quat) to treat all vehicles. Leave all treated surfaces (exposed to disinfectant solution) (wet) for 10 minutes or more. For sprayer applications, use a coarse spray device.

DISINFECTANT/VIRUCIDAL* DIRECTIONS TO TREAT HARD NON-POROUS, NON-FOOD CONTACT SURFACES OF AUTOMATED TRAY, RACK AND BUGGY WASHERS: Mix a solution containing 4 oz. per 5 gallons of water (or equivalent dilution) (625 ppm active quat). Remove all litter and manure from surfaces to be treated. Treat hard non-porous, non-food contact surfaces of automated trays, racks and buggy washers into solution for 10 minutes. Thoroughly clean all surfaces with soap or detergent and rinse with water before reuse. Change the disinfecting solution at least daily or when solution appears dirty.

DISINFECTANT/VIRUCIDAL* DIRECTIONS TO TREAT HARD NON-POROUS, NON-FOOD CONTACT SURFACES IN EGG RECEIVING AND EGG HOLDING AREAS: Mix a solution containing 4 oz. per 5 gallons of water (or equivalent dilution) (625 ppm active). Remove all litter and manure from surfaces to be treated. Saturate hard non-porous, non-food surfaces with the solution for a period of 10 minutes. Apply by mop, brush or sprayer. Thoroughly clean all surfaces with soap or detergent and rinse with

water before reuse. Change the disinfecting solution at least daily or when solution appears dirty.

MEAT PACKING PLANTS: Use Q-SAN to disinfect hard, non-porous surfaces associated with the following sites: livestock vehicles and holding pens, perceiving areas and delivery chutes, slaughter areas and conveyors, hand, rub and guide rails, post knock cabinets, stands and flooring surfaces, chains and moving process lines, surfaces of equipment for hide operations consisting of brine curing, hide transfer bin surfaces, chutes, conveyors, tallow and animal feed production hard, non-porous surfaces, processed products and offal equipment surfaces, fabrication and processing areas covering cold storage areas, all stainless steel cut out and prep tables, counter tops, conveyors, chains, tables, floors, walls and all stainless surfaces. For application, saturate all surfaces with solution and scrub to loosen all soils. Use 3 ounces per 5 gallons of water solution (469 ppm active quat) (or equivalent use dilution). Surfaces must remain wet for 10 minutes, then thoroughly rinsed with potable water before operations are resumed. In order to use as a disinfectant, fungicide or virucide, apply 4 ounces per 5 gallons of water solution (625 ppm active quat) (or equivalent use dilution). Follow the same procedure as above.

All treated equipment that will contact animal feed or food surfaces must be thoroughly scrubbed with soap or detergent then rinsed with potable water before reuse.

HIDE/LEATHER PROCESSING PLANTS: To use as a disinfectant/fungicide on hard, non-porous surfaces, add 4 ounces to 5 gallons of water (625 ppm active quat) (or equivalent use dilution). The product can be used on hide storage bins, holding tanks, chill tanks, serpentine tanks and chains, machine and tannery equipment surfaces, conveyors and trolleys, hide press, grading and storage areas and scales, etc. Pre-clean all surfaces prior to use to remove gross soils. Thoroughly wet all hard, non-porous surfaces by evenly applying the use solution. Apply use solution with a brush, cloth, mop, sponge, sprayer or by immersion, thoroughly wetting surfaces. For sprayer applications, use a coarse spray device at 6-8" from surfaces. Do not breathe spray. Treated surfaces must remain wet for 10 minutes. Wipe dry or allow to air dry.

SPECIAL INSTRUCTIONS FOR INACTIVATING AVIAN INFLUENZA A (H5N1): Remove all poultry and feeds from (premises) (areas to be treated), 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 surfaces with soap or detergent and rinse with water. Saturate surfaces with the disinfecting solution (4 oz per 5 gallons of water) (625 ppm active quat) (equivalent use dilution) for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling and restraining animals as well as forks, shovels, scrapers used in removing litter and manure. Ventilate buildings, coops, and other closed spaces. Do not house poultry or employ equipment until treatment has been absorbed, set, or dried. Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains, and waterers with soap or detergent, and rinse with potable water before reuse.

SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES in ANIMAL PREMISES

TO SANITIZE HOOF TRIMMING EQUIPMENT: Prior to application, pre-clean hoof trimming equipment before and after use on each animal with detergent and warm water or compatible cleaner to remove soil using a pre-scrape, pre-flush, or when necessary, pre-soak followed by a potable water rinse. To sanitize, prepare a ¼ oz of Q-SAN per 1 gallon of water solution (200 ppm active quat) (or equivalent use dilution). Apply to pre-cleaned hard surfaces using a brush, cloth, mop, sponge or sprayer or by

immersion to thoroughly wet surfaces. Allow surfaces to remain wet for at least 3 minutes followed by adequate draining or air drying. Prepare fresh solution at least daily or when solution becomes visibly dirty.

SANITIZING HATCHERY ROOMS USING FOGGING DEVICES

Remove all animals and feed from (premises) (areas to be treated), vehicles and enclosures. Remove all litter and manure from floors, walls and surfaces of the room to be treated. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Close room off so fog is confined to room to be treated. Mix 96 ounces of Q-SAN to 320 ounces of water (or equivalent use dilution). Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. Insert the nozzle of the fogger through a suitable opening into the room. With the setting in maximum output, fog for one minute for each 4000 cubic feet of space in the room. When fogging is completed, ventilate buildings and other closed spaces. Do not allow people to contact or breathe this fog and do not enter until 2 hours after fogging is complete. Do not house livestock or employ equipment until treatment has been absorbed or dried. Thoroughly clean all surfaces with soap or detergent and rinse with water.

SANITIZING INCUBATORS AND HATCHERS USING FOGGING DEVICES

Mix 10 ounces of Q-SAN to 125 ounces of water (or equivalent use dilution). Wear a dust mist respirator when mixing the use solution and pouring it into the fogging apparatus. Fog 3-8 ounces of this into setters and hatchers immediately after transfer. Repeat daily in setters and every 12 hours in hatchers. Discontinue hatcher treatments at least 24 hours prior to pulling the hatch. Do not allow people to contact or breathe this fog. It is acceptable to fog setters and hatchers with a 1-ounce per gallon of water solution of Q-SAN (or equivalent use dilution) on an hourly or every other hour basis. If this is done, fog for 30-90 seconds once per hour or once every two hours. When fogging is complete, ventilate buildings and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed 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. Only for treatment of setters and hatchers after poultry/chicks/eggs have been removed. Not for treatment of hatchers which contain chicks/eggs.

Note: The fog generated is irritating to the eyes, skin and mucous membranes. Under no circumstances must a room or building be entered by anyone within two hours of the actual fogging and a minimum of 4 air exchanges (ACH) per hour in the facility. If the building must be entered, then the individuals entering the building must wear a self-contained respirator approved by NIOSH/MSHA, goggles, long sleeves and long pants.

FOGGING IS TO BE USED AS AN ADJUNCT TO ACCEPTABLE MANUAL CLEANING AND DISINFECTING OF ROOM AND MACHINE SURFACES.

BARBER/SALON

DISINFECTION OF BARBER/SALON TOOLS DIRECTIONS: Pre-cleaned barber/salon tools, such as combs, brushes, plastic rollers, razors, clipper and trimmer blades, tweezers, manicure/pedicure tools and scissors, can be disinfected by immersing in 0.6 ounces per gallon solution of Q-SAN (or equivalent use dilution) (469 ppm active quat). Completely immerse instruments and tools for at least 10 minutes. Rinse thoroughly and dry before use. Fresh solution must be prepared at least daily or more often if solution becomes cloudy or soiled.

**DISINFECTION/FUNGICIDE/VIRUCIDE FOR BARBER/SALON TOOLS
DIRECTIONS:** Immerse pre-cleaned barber/salon tools, such as combs, brushes, plastic rollers, razors, clipper and trimmer blades, tweezers, manicure/pedicure tools

and scissors in a 0.8 ounce per gallon solution of the product (or equivalent use dilution) (625 ppm active quat). Completely immerse instruments and tools for at least 10 minutes. Rinse thoroughly and dry before use. Fresh solution must be prepared at least daily or more often if solution becomes cloudy or soiled.

(OR)

FOR USE TO CLEAN AND DISINFECT BARBER AND BEAUTY/MANICURE INSTRUMENTS AND TOOLS:

1. Pre-clean heavily soiled items.
2. Completely immerse pre-cleaned combs, scissors, plastic rollers, clipper blades, razors, manicure implements and other non-porous instruments in the use solution (4 ounces per 5 gallons) (or equivalent use dilution) (625 ppm active quat) so that surfaces remain wet for ten (10) minutes.
3. Rinse surfaces thoroughly and let air dry before reuse.
4. Change solution at least daily or sooner if visibly dirty.

(OR)

DISINFECTING/VIRUCIDE GROOMING CLIPPERS: Remove hair, dandruff and dust particles prior to disinfecting the blades. Turn the clipper off occasionally during use and spray between the teeth of blades with a solution of 4 ounces per 5 gallons of water (or equivalent use dilution) (625 ppm active quat). Allow surface to remain wet for at least 10 minutes. Rinse surfaces thoroughly. Then wipe dry with a clean soft cloth.

(OR)

CLEANING HAIR CLIPPERS AND ELECTRIC SHEARS: While clipper/shear is running, hold in the downward position and spray a 3-ounce per 5 gallons of water solution (or equivalent use dilution) (469 ppm active quat) of Q-SAN directly onto the blades two or three times to thoroughly wet the blades. Do not spray on the clipper case or drip into clipper housing. Turn off clipper/shear. Allow surface to remain wet for at least 10 minutes. Rinse surfaces thoroughly. Then wipe dry with a clean soft cloth. Lubricate as per clipper/shear manufacturer's instructions.

(OR)

CLEANING BARBER/SALON SHEARS AND OTHER IMPLEMENTS: Spray shear/implement until thoroughly wet. Wipe away visible debris using a soft bristle brush or cloth. Turn off clipper/shear. Immerse precleaned shear/implement into a container of 3 ounces per 5 gallons of water solution (or equivalent use dilution) (469 ppm active quat) of Q-SAN for at least 10 minutes. Rinse surfaces thoroughly. Remove shear/implement and wipe dry. Use fresh solution at least daily or when immersion tank (bowl) (sink) solution becomes diluted or visibly soiled.

Note: Plastic instruments can remain immersed until ready to use. Stainless steel shears and metal instruments must be removed after 10 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle. Prolonged soaking will cause damage to metal instruments.

DISINFECTION OF HARD, NON-POROUS SURFACES IN FOOTBATHS: To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the footbath, drain the water and thoroughly clean all hard, non-porous surfaces with soap or detergent, then rinse with water. Saturate surfaces with a use solution of 0.6 ounce per gallon of water (or equivalent use dilution) (469 ppm active quat) to exposed surfaces with a brush, cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow solution to stand for 10 minutes. For spray applications, use a coarse spray device. Do not breathe spray. After the unit has been thoroughly disinfected, rinse all cleaned surfaces with fresh water. Do not use equipment until treatment has been absorbed, set or dried.

DISINFECTION/FUNGICIDE/VIRUCIDE OF HARD, NON-POROUS SURFACES IN FOOTBATHS: To remove body oils, dead tissue, soil and all other buildups or organic

matter on inanimate surfaces after using the footbath, drain the water and thoroughly clean all hard, non-porous surfaces with soap or detergent, then rinse with water. Saturate surfaces with a use solution of 4 ounces per 5 gallons of water (or equivalent use dilution) (625 ppm active quat) to exposed surfaces with a brush, cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow solution to stand for 10 minutes. For spray applications, use a coarse spray device. Do not breathe spray. After the unit has been thoroughly disinfected, rinse all cleaned surfaces with fresh water. Do not use equipment until treatment has been absorbed, set or dried.

**SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES
in BARBER/SALON FACILITIES**

SALON/BARBER INSTRUMENTS AND TOOLS SANITIZER DIRECTIONS: Pre-clean soiled instruments and tools. Completely immerse water safe non-porous instruments and tools in a solution of ¼ ounce per gallon (or equivalent use dilution) (200 ppm active) of water for at least 3 minutes. Rinse thoroughly and dry before use. Fresh solution must be prepared at least daily or more often if solution becomes cloudy or soiled. (Not applicable in California)

Note: Plastic instruments can remain immersed until ready to use. Stainless steel shears and metal instruments must be removed after 10 minutes, rinsed, dried, and kept in a clean non-contaminated receptacle. Prolonged soaking will cause damage to metal instruments.

RESTROOM/BATHROOM

**NON-ACID TOILET BOWL (& URINAL) (& BATHROOM)
DISINFECTANT/CLEANER DIRECTIONS**

Remove gross filth prior to disinfection.

FROM CONCENTRATE: Add ¼ oz. of Q-SAN to the toilet bowl and mix. Brush thoroughly over exposed surfaces and under the rim with a brush, cloth, mop, or sponge. Repeat and allow solution to stand for 10 minutes and flush.

(Or use alternate Concentrate Use directions)

FOR USE AS A NON-ACID BOWL CLEANER/DISINFECTANT IN TOILET BOWLS FROM CONCENTRATE:

1. Pre-clean heavily soiled areas.
2. Add ¼ fluid ounces into toilet bowl.
3. Swab entire surface area especially under the rim.
4. Repeat and allow entire surface to remain wet for ten (10) minutes.
5. Flush toilet and rinse swab applicator thoroughly.

FROM USE-SOLUTION: Preclean surface. Empty toilet bowl or urinal and apply a 0.6 oz per gallon use solution to exposed surfaces including under the rim with a brush, cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow solution to stand for 10 minutes and flush. For spray application, use a coarse spray device.

(Or use alternate Use-Dilution directions)

FOR USE AS A NON-ACID BOWL CLEANER/DISINFECTANT IN TOILET BOWLS (AND URINALS) FROM USE-DILUTION:

1. Pre-clean heavily soiled areas.
2. Empty toilet bowls by forcing water through the trap. Apply Use Dilution to exposed surfaces in toilet bowls and urinals.
3. Swab entire surface area especially under the rim.
4. Allow entire surface to remain wet for ten (10) minutes.
5. Flush toilet and rinse swab applicator thoroughly.

(Or use alternate Use-Dilution directions)

TOILET BOWLS/URINALS: Swab bowl with brush to remove heavy soil prior to cleaning or disinfecting. Clean by applying use-solution around the bowl and up under the rim. Stubborn stains can require brushing. To disinfect, first preclean to remove heavy soil, then remove or expel over the inner trap the residual bowl water. Pour in 0.6 oz. of the use dilution. Swab the bowl completely using a scrub brush or mop, making sure to get under rim. Let stand for 10 minutes or overnight, then flush.

(Or use alternate Use directions)

DISINFECTION AND CLEANING TOILET BOWLS AND URINALS:

1. With a swab mop applicator, remove water from bowl by forcing out trap. Preliminary cleaning is required for heavily soiled surfaces.
2. Press swab mop against side of bowl to remove excess water from applicator.
3. Apply a solution of 3 ounces of Q-SAN per 5 gallons of water evenly onto surface to be cleaned and disinfected.
4. Swab entire surface area especially under the rim where outlets are located.
5. Allow Q-SAN to remain wet on surfaces at least 10 minutes.
6. Flush toilet and rinse applicator thoroughly.

(Or)

GENERAL CLEANING TOILET BOWL: Apply (Open cap) (Squeeze gently, directing) 0.6 ounce of bowl cleaner under the rim and on sides of bowl (inside only). Brush, clean and flush toilet. (Close cap). Rinse brush with clean water. Do not use on any other surfaces including toilet seat, toilet lid, countertops, tubs and sinks. To clean other acid resistant toilet bowls or urinals, dilute product with 3 parts water. Do not allow solution to remain on surfaces without immediately rinsing thoroughly with water.

(Or)

TO CLEAN AND DISINFECT: A preliminary cleaning is required for the removal of heavy soil prior to disinfection. Fill toilet bowl with clean water. Saturate mop with 0.6 ounce of Q-SAN while holding bottle and mop applicator over bowl. Swab bowl completely making sure to get under the rim. Let stand for 10 minutes then flush. Rinse applicator completely.

(Or)

TO DISINFECT TOILET BOWLS: Fill toilet bowl with clean water. Apply (Squeeze) 0.6 ounce of bowl cleaner onto bowl brush. Clean the entire unit especially under the rim at water outlets. Allow surface to remain wet 10 minutes. Flush and rinse out bowl brush with clean water. A preliminary cleaning step is required for the removal of heavy soil prior to disinfection.

(Or)

TO DISINFECT TOILET BOWLS: Flush to remove heavy soil. To clean, simply squirt 0.6 ounce of Q-SAN under the rim and around sides. Allow it to stand several minutes then scrub entire surface (especially under the rim) with a bowl (toilet) mop. Flush and rinse. To disinfect, squirt 0.6 ounces of Q-SAN under the rim and around the sides. Scrub bowl with mop. Allow solution to remain in the bowl for 10 minutes after scrubbing. Flush and rinse.

(Or)

TO DISINFECT TOILET BOWLS:

1. Remove gross filth and heavy soil deposits.
2. Fill toilet bowl with clean water.
3. Apply 0.6 ounce of Q-SAN to swab applicator, brush, cloth, mop, sponge, or directly to surface.
4. Swab entire surface area, especially under the rim.
5. Allow entire surface to remain wet for ten (10) minutes.
6. Flush toilet and rinse swab applicator thoroughly.

(Or)

TOILET BOWL (AND URINAL) DISINFECTION/CLEANER DIRECTIONS: Remove gross filth prior to disinfection. Empty toilet bowl or urinal and apply solution of 0.6 ounce of Q-SAN per 128 ounces of water to exposed surfaces including under the rim with a brush, cloth, mop, sponge or sprayer. Allow toilet bowl to fill with water. Brush or swab thoroughly and allow solution to stand for 10 minutes and flush.

(Or)

TO CLEAN AND DISINFECT URINALS: Flush to remove heavy soil. Remove screens and strainers. Then squirt a solution of 0.6 ounce of Q-SAN per 128 ounces of water around edges and top. Allow solution to flow down over surfaces. Allow it to stand several minutes before scrubbing, then flush and rinse. To disinfect, allow solution to remain in urinal at least 10 minutes after scrubbing.

(Or)

TO DISINFECT URINAL:

1. Remove gross filth and heavy soil deposits.
2. Apply solution of 0.6 ounce of Q-SAN per 128 ounces of water directly to urinal surfaces including water outlets area for general cleaning.
3. Then pour additional solution on applicator.
4. Clean entire unit, especially under rim at water outlets, with applicator.
5. Remove screen trap to deodorize drain and apply 0.6 ounce directly on edge and into drain.
6. Wait 10 minutes, flush and rinse applicator.

(Or)

TO CLEAN WATERFREE (WATERLESS) URINALS: Remove any debris from the bowl. Spray (product name) onto urinal surface. DO NOT spray product directly onto cartridge. Wipe surface to clean. Change cartridge as needed.

DEEP CLEANING/DISINFECTING WATERFREE (WATERLESS) URINALS: Remove and properly dispose of cartridge according to manufacturer's directions. Deep clean or disinfect the entire urinal by applying 0.6 ounce of Q-SAN directly onto surface. Brush (scrub) surfaces and let solution stand for 10 minutes. Dry surface with a soft cloth. Do not pour excess or soiled water down waterless urinal trap.

FOR HEAVY DUTY CLEANING: Preclean surface. Empty toilet bowl or urinal and apply 18 ounces per 5 gallons (or equivalent dilution) use solution to exposed surfaces including under the rim with a brush, cloth, mop, sponge or sprayer. Brush or swab thoroughly and allow solution to stand for 10 minutes and flush. For sprayer application, use a coarse spray device and swab all areas after spraying.

TO DISINFECT TUBS, SHOWER STALLS, SINKS, FAUCETS: Swab area and remove gross filth and heavy soil. Apply 0.6 ounce of (product name) per gallon of water (625 ppm active quat) (or equivalent use dilution) onto surface to be cleaned or apply with cloth or sponge to wet all surfaces thoroughly and allow surface to remain wet for at least 10 minutes. Wipe around with damp cloth or sponge. Do not allow solution to dry on surface. Rinse thoroughly with water.

FOR USE TO CLEAN AND DISINFECT SHOWER ROOMS, LOCKER ROOMS AND OTHER LARGE, OPEN AREAS WITH FLOOR DRAINS:

1. Pre-clean heavily soiled areas.
2. Apply use solution of 4 ounces per 5 gallons of water, (625 ppm quat active) to floors, walls and ceilings making sure not to over spray. To disinfect, all surfaces must remain wet for 10 minutes.

Special instructions for foam guns: Pour concentrate into foam gun bottle and attach bottle to spray nozzle and ensure gun is attached to hose. (Note: See foam gun instructions for more information. Make sure setting is set for a 1:160 dilution.) Once in place, squeeze the handle to disperse foam solution. To disinfect, all surfaces must remain wet for ten (10) minutes. (Foam guns not for use in California.)

3. Scrub using a deck brush or other coarse material as necessary.
4. Rinse surfaces thoroughly and let air dry.

Note: Rinsing is not necessary unless floors are to be coated with finish or restorer. All food contact surfaces, such as appliances and kitchen countertops, must be rinsed with potable water. Do not use Q-SAN to clean or disinfect glassware, utensils, dishes or interior surfaces of appliances.

RV HOLDING TANKS/RECREATIONAL VEHICLES (Not for use in CA): For toilet waste and holding tanks, cover bottom of holding tank with water and 1.3 to 6.25 ounces per 5 gallons of water (or equivalent use dilution) to deodorize. If odors return before time to empty, add 1.3 to 3.1 ounces per 5 gallons of water (or equivalent use dilution) to the tank. For kitchen waste, add 1.3 to 3.1 ounces per 5 gallons of water (or equivalent use dilution) to gray water tank as needed to control malodors created by dirty dishwasher.

FUNGICIDAL/DEODORIZATION/MOLD & MILDEW

FUNGICIDAL PERFORMANCE:

Trichophyton mentagrophytes (ATCC 9533)
Aspergillus niger (ATCC 6275)

FUNGICIDAL ACTIVITY: At 4 ounces per 5 gallons use-level (or equivalent use dilution) (625 ppm active quat) Q-SAN is effective against *Trichophyton mentagrophytes* (athlete's foot fungus) (a cause of Ringworm) (a cause of Ringworm of the foot) on inanimate surfaces in the presence of 5% blood serum in locker rooms, dressing rooms, shower and bath areas and exercise facilities. Saturate surfaces with use solution. Treated surfaces must remain wet for 10 minutes. Allow solution to dry on surface and repeat treatment every seven days or when new growth appears.

MOLD AND MILDEW CONTROL: At 4 ounces per 5 gallons (or equivalent use dilution) (625 ppm active quat) Q-SAN will effectively inhibit the growth of mold and mildew and the odors caused by them when applied to hard, non-porous surfaces (as indicated in general instructions above). Allow solution to dry on surface and repeat treatment every seven days or when new growth appears. Allow surface to remain wet for ten (10) minutes.

CLEANING/DEODORIZING DIRECTIONS: Add 2¼ to 9 ounces per gallon (or equivalent dilution) of water to clean and deodorize windows, mirrors and glass surfaces. Apply solution with a brush, mop, cloth, sponge or mechanical sprayer so as to wet all surfaces thoroughly. For sprayer applications, use a coarse spray device. Spray 6-8 inches from surface. Rub with sponge or cloth. Allow surface to air dry or wipe up excess liquid. Do not breathe spray.

GENERAL DEODORIZATION: To deodorize, add 3 ounces of Q-SAN to 5 gallons of water (or equivalent use dilution) (469 ppm active quat). Excess material must be wiped up or allowed to air dry.

OR

DEODORIZER: To deodorize, apply Q-SAN as indicated under the heading "General Disinfection" above.

FOR DEODORIZING GARBAGE CANS, GARBAGE TRUCKS, INDUSTRIAL WASTE RECEPTACLES AND GARBAGE HANDLING EQUIPMENT: It is especially important to pre-clean for the product to perform properly. Then apply a wetting concentration of 3.25 ounces of Q-SAN per gallon of water (or equivalent use dilution) (2,500 ppm quat active). Treated surfaces must remain wet for 10 minutes.

FOR DEODORIZING SEPTIC STORAGE TANKS: When tanks are empty, pour 3 oz. per 5 gallons of water (469 ppm active quat) (or equivalent use dilution) into septic storage tank on recreational vehicles, campers and boats to control the bacteria that

can cause odors. As tank fills with sewage and the vehicle is moving, this solution will mix and provide an adequate deodorizing solution for this use. Q-SAN is to be used on gray and black water tanks only. Check with local, state, or federal authorities before disposing of sewage in accordance to federal, state and local regulations for waste disposal. (Not for use in CA)

AIR FRESHENER/AUTOMOTIVE USES: A solution of 3 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution) (469 ppm active quat) will effectively neutralize damp musty odors caused by mildew in storage areas, basements, closets, bathrooms and A/C filters. Spray or apply onto seats, carpets, headliner and ashtray or into trunk and all vents to eliminate odors from tobacco, beverage spills and musty carpet. For sprayer applications, use a coarse spray device. Allow surfaces to air dry.

FOR ODORS CAUSED BY DOGS, CATS AND OTHER DOMESTIC ANIMALS: Use on rugs, floors, walls, tile, cages, crates, litter boxes, mats, floor coverings, or any surface soiled by a pet. Test a small inconspicuous area first. Blot problem area. Then follow directions for "General Deodorization".

TO CONTROL THE GROWTH OF MOLD AND MILDEW ON LARGE, INFLATABLE, NON-POROUS PLASTIC AND RUBBER STRUCTURES (animals, promotional items, moonwalks, slides, obstacle course play and exercise equipment): Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use solution of 3 ounces per 5 gallons (469 ppm active quat) of water (or equivalent dilution) for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not use equipment until treatment has been absorbed, set or dried.

FOR DISINFECTION AND TO CONTROL THE GROWTH OF MOLD AND MILDEW ON NON-POROUS ATHLETIC EQUIPMENT (wrestling and gymnastic mats, athletic training tables, physical therapy tables, athletic helmets, wrestling/boxing headgear, athletic shoe soles): Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use solution of 3 ounces per 5 gallons (469 ppm active quat) of water (or equivalent dilution) for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not use equipment until treatment has been absorbed, set or dried.

GLASS CLEANING/DEODORIZING DIRECTIONS: Add ½ to 1.75 fluid ounce per gallon (2-8 milliliters per liter) of water (or equivalent use dilution) to clean and deodorize windows, mirrors, and glass surfaces. Use a coarse spray device. Spray 6-8 inches from surface. Rub with sponge or cloth. Do not breathe spray.

HUMIDIFIER DIRECTIONS: Formulated for use in portable humidifiers. Thoroughly clean water tank and filters (before each heating season, or sooner if necessary). Add 0.1 ounces of Q-SAN per gallon of refill water (or equivalent use dilution). Not for use in heat or atomizing type humidifiers. (Not for use in California.)

(OR)

HUMIDIFIER BACTERIA/ALGAE TREATMENT (Not for use in California.): Formulated for use in portable humidifiers. Thoroughly clean water tank and filters before each heating season, or sooner if necessary. For every gallon of water in the humidifier tank add 0.1 ounces of Q-SAN (or equivalent use dilution). When you refill the tank, add 0.1 ounces of Q-SAN for every gallon of water added in the tank (or equivalent use dilution).

Not for use in heat vaporizing or atomizing type humidifiers.

WATER AND SMOKE DAMAGE RESTORATION (Not for use in California.) (Effective against odor-causing bacteria and fungi for home, institutional, industrial and hospital use.) Q-SAN is particularly suitable (for use in water damage restoration situations against odor causing bacteria) on the following (porous and semi-porous) materials: (carpets, carpet cushion, upholstery, drapes,) sub floors, drywall, trim and

frame lumber, tackless strip and paneling. Saturate affected materials with enough product to remain wet for at least 10 minutes. Use proper ventilation. *(Parenthesis statement not for use in CA.)*

SMOKE DAMAGE RESTORATION: (Effective against odor causing bacteria and fungi for home, institutional, industrial and hospital use.) Q-SAN is particularly suitable (for use in smoke damage restoration situations against odor causing bacteria) on the following (porous and semi-porous) materials: (carpets, carpet cushion, upholstery, drapes,) sub floors, drywall, trim and frame lumber, tackless strip and paneling. Follow directions as outlined in the Water Damage Restoration section. Saturate affected materials with enough product to remain wet for at least 10 minutes. Use proper ventilation. *(Parenthesis statement not for use in CA.)*

SEWER BACKUP & RIVER FLOODING *(Not for use in California.):* During mitigation procedures, dilute 1-2 ounces of Q-SAN per gallon of water (or equivalent use dilution) allowing for the diluting effect of absorbed water within saturated materials. Remove gross filth or heavy soil along with non-salvageable materials. Saturate all affected areas with a sprayer using a coarse spray tip before and after cleaning and extraction.

(CARPETS, CARPET CUSHIONS, UPHOLSTERY, DRAPES AND OTHER POROUS MATERIALS), SUB FLOORS, DRYWALL, TRIM AND FRAME LUMBER, TACKLESS STRIP AND PANELING: For water damage from a clean water source, extract excess water. Test hidden area for colorfastness. Dilute 1-2 ounces of the product per gallon of water (or equivalent use dilution) (781-1562 ppm active quat), allowing for the diluting effect of absorbed water within saturated materials. Remove gross filth or heavy soil. Apply directly with a sprayer using a coarse spray tip to fully saturate affected materials. Roll, brush or agitate into materials and allow the materials to remain damp for 10 minutes. Follow with a thorough extraction. Dry rapidly and thoroughly. *(Parenthesis statement not for use in CA.)*

SPECIAL INSTRUCTIONS FOR CLEANING CARPET (AGAINST ODOR CAUSING BACTERIA): Q-SAN can be used in industrial, institutional, commercial and residential areas such as homes, motel & hotel chains, nursing homes, schools and hospitals. For use on wet, cleanable synthetic fibers. Do not use on wool. Vacuum carpet thoroughly prior to cleaning. Test fabric for color fastness. *(Parenthesis statement not for use in CA.)*

For Portable Extraction Units: Mix ½ ounce of Q-SAN per gallon of water (or equivalent use dilution).

For Truck Mounted Extraction Machines: Mix 12 ounces of Q-SAN per gallon of water (or equivalent use dilution) and meter at 4 gallons per hour.

For Rotary Floor Machines: Mix 1 ounce of Q-SAN per gallon of water (or equivalent use dilution) and apply at the rate of 300-500 sq. ft. per gallon.

Do not mix Q-SAN with other cleaning products. Follow the cleaning procedures specified by the manufacturer of the cleaning equipment. After using Q-SAN, set the carpet pile and protect the carpet from furniture legs and bases while drying. Do not over wet. If applied to stain resistant nylon carpet, apply a fabric protector according to the carpet manufacturer's directions.

**CARPET CLEANING/DEODORIZATION (AGAINST ODOR-CAUSING BACTERIA)
FOR HOME, INSTITUTIONAL, INDUSTRIAL AND HOSPITAL USE**

(Parenthesis statement not for use in CA.)

Q-SAN cleans and deodorizes the carpet (by controlling/reducing the growth of odor-causing bacteria). It can be used in industrial, institutional, commercial and residential areas such as homes, motels, hotels chains, nursing homes and hospitals. *(Parenthesis statement not for use in CA.)*

Vacuum carpet thoroughly prior to application. Mix ½ ounce of product per gallon of water (or equivalent use dilution). Follow the injection and/or extraction procedures as specified for any conventional steam cleaning equipment you are using. For rotary floor machines, mix 1 ounce per gallon of water and spray on carpet at a rate of 300-500 sq. ft. per gallon.

(For use) (Use Q-SAN) on washable synthetic fibers. Do not use on wool. Test color fastness of carpet before use. Apply diluted product to a small, concealed spot, then rub with a clean white cloth. If color changes or transfers to the cloth, a water-based product must not be used.

After using the product, set carpet pile in one direction with a stiff brush. Place aluminum foil under the legs of furniture while carpet is drying. Over-wetting can cause carpet to shrink. Manufacturer assumes no responsibility for over-wetting misuse.

Note: Q-SAN must not be mixed with other cleaning products.

OTHER USES

DISINFECTION/FUNGICIDE OF HARD, NON-POROUS SURFACES IN WHIRLPOOL UNITS: After using the whirlpool unit, drain and refill with fresh water to just cover the intake valve. Add 4 ounces of Q-SAN for each 5 gallons of (0.80 ounces to one gallon) (or equivalent use dilution) (625 ppm active quat) water at this point. Briefly start the pump to circulate the solution. Turn off the pump. Wash down the unit sides, seat of the chair, lift and any/all related equipment with a clean swab, brush or sponge. Treated surfaces must remain wet for 10 minutes. After the unit has been thoroughly disinfected, drain the solution from the unit and rinse any/all cleaned surfaces with fresh water. Repeat for heavy soiled units.

WATERBED CONDITIONER: When used as a waterbed conditioner, controls the growth of odor-causing and slime-forming bacteria. Prevents bubbles, preserves plasticizers, conditions vinyl interior, sequesters minerals.

If bed has not been treated properly, drain bed completely. Add 15 gallons of water and mix vigorously. Drain bed again. Fill bed with water and follow dosage directions.

Dosage: To control growth of odor-causing and slime-forming bacteria, add 4 1/8 fluid ounces (or equivalent use dilution) in a free flow waterbed of 90 to 180 gallon capacity. Add 8 ¼ fluid ounces (or equivalent use dilution) in a waveless/fiber waterbed mattress of 90 to 180 gallon capacity. Repeat application every 4 to 6 months.

CLEANSING OF BODY SURFACES AND BODY ORIFICES OF HUMAN REMAINS: To cleanse away skin secretions and accompanying malodor, to insure the removal of all soil and bloodstains, apply 3 ounces of Q-SAN to 5 gallons of water (or equivalent use dilution) (469 ppm active) to the entire body. Bathe the entire body using sponge or washcloth. A soft brush may be employed on surfaces other than the face. Allow a 10 minute contact time for optimal results. Prepare a fresh solution for application of each remains.

FOR USE ON FINISHED FLOORS: To limit gloss reduction, use 4 ounces of Q-SAN per 5 gallons of water (or equivalent use dilution). Apply with a damp mop or auto scrubber. Allow surface to air dry.

FOR DISINFECTING BAGLESS VACUUM CLEANERS: Add 3 ounces of Q-SAN to 5 gallons of water (469 ppm active quat) (or equivalent use dilution). Turn off and unplug vacuum cleaner. Remove the hard, non-porous container that houses collected material from vacuum cleaner. Empty contents into a waste receptacle. Rinse collection container with water and wipe clean to remove any additional collected material. Apply solution to collection container with a cloth, sponge, or hand pump trigger spray device

so as to wet all surfaces thoroughly. For sprayer applications, use a coarse spray device. Allow surfaces to remain wet for 10 minutes. Then remove excess liquid. Wipe and let surface air dry. Reattach container to vacuum cleaner.

COMMERCIAL FLORIST USE DIRECTIONS: To clean, disinfect and deodorize hard, non-porous surfaces in one step, prepare use solution by adding (mixing) 3 ounces per 5 gallons of water (469 ppm active) (or equivalent use dilution). For heavy-duty use, add (mix) 12 ounces per 5 gallons of water (1,875 ppm active) (or equivalent use dilution).

Remove all leaves, petals, garbage and refuse. Pre-clean surfaces using pressurized water where possible. Apply Use solution to hard, (inanimate) non-porous surfaces, thoroughly wetting surfaces as required, with a cloth, mop, brush, sponge or sprayer.

For heavily soiled areas, a preliminary cleaning is required.

For sprayer applications, use a coarse pump or trigger spray device. Spray 6-8 inches from surface. Rub with brush, sponge, mop or cloth. Do not breathe spray.

Treated surfaces must remain wet for 10 minutes. Allow surface to air dry.

Prepare a fresh solution at least daily or sooner if use solution becomes visibly dirty.

WORK AREAS AND BENCHES: Spray or swab working surface with a solution of 3 oz. of Q-SAN per 5 gallons of water (or equivalent use dilution) for 10 minutes before each work period and again after each plant is completed to help control transfer of diseases such as *Botrytis*, crown rot, downy mildew, *Erwinia*, *Phalaenopsis* and root rot. To apply solutions for sprayer applications, use as a coarse spray only.

POTS, FLATS AND FLOWER BUCKETS: Brush or wash used pots and flats, then soak in a solution of 3 oz. of Q-SAN per 5 gallons of water (or equivalent use dilution) for 10 minutes to help control transfer of diseases such as anthracnose, blight, *Botrytis*, crown rot, *Erwinia*, mildew, *Phalaenopsis*, root rot, and rust.

CUTTING TOOLS: Soak cutting edge of tool for 10 minutes in a solution of 3 oz. of Q-SAN per 5 gallons of water (or equivalent use dilution) before use to help control transfer of diseases such as *Botrytis*, *Erwinia*, *Phalaenopsis*, root and stem rots, and Tobacco Mosaic Virus (TMV). Dry and oil tools at the end of each workday.

DIRECTIONS FOR HOUSEHOLD USE

KITCHEN/BATHROOM/HOUSEHOLD CLEANING: Apply 4 oz per 5 gallons of water (625 ppm active) (or equivalent use dilution) solution with a cloth, sponge, mop or directly on surface with a mechanical spray. If a mechanical spray is used spray must be coarse. Hold container 6 inches to 8 inches from surface and spray until thoroughly wet. Wipe the soiled area clean. Q-SAN is not to be used on dishware, glasses or eating utensils.

DISINFECT/DEODORIZE: To disinfect hard, non-porous surfaces such as floors, walls, counters, sinks, tubs, toilets, glazed tile, exterior surfaces of appliances, refrigerators or freezers, microwave exteriors, stove tops and hoods, tables, garbage pails and faucets apply 4 oz per 5 gallons of water (625 ppm active) (or equivalent use dilution) with cloth, sponge, mop or mechanical spray. If a mechanical spray is used, spray must be coarse. Hold container 6 inches to 8 inches from surface and spray until thoroughly wet. Treated surface must remain wet for 10 minutes before wiping. For heavily soiled areas a pre-cleaning step is required. The pre-cleaning step must be done according to the Kitchen/Bathroom/Household Cleaning directions. Rinse with potable water after use on surfaces that come in contact with food.

SANITIZER DIRECTIONS FOR NON-FOOD CONTACT SURFACES

SANITIZATION OF HARD, NON-POROUS SURFACES IN WHIRLPOOL UNITS: To remove body oils, dead tissue, soil and all other buildups or organic matter on inanimate surfaces after using the whirlpool unit, drain and refill with fresh water to just cover the intake valve. Add ¼ ounce of Q-SAN for each gallon of (or equivalent use dilution) (200 ppm active quat) water at this point. Briefly start the pump to circulate the solution. Turn off the pump. Wash down the unit sides, seat of the chair, lift and any/all related equipment with a clean swab, brush or sponge. Treated surfaces must remain wet for 3 minutes. After the unit has been thoroughly sanitized, drain the solution from the unit and rinse any/all cleaned surfaces with fresh water. Repeat for heavy soiled units.

LAUNDRY DEODORIZER (AGAINST ODOR CAUSING BACTERIA): Use 3.5 ounces per 100 pounds of dry weight fabric. Dilute the appropriate amount of Q-SAN in one to two gallons of water, then add to the wash wheel in the final rinse. Re-treat fabric after each washing. For activity against odor causing bacteria, conditions of high relative humidity or wet contamination are required. Laundered fabric may also be treated by soaking.

SANITIZATION OF EXTERIOR HOUSEHOLD SURFACES DIRECTIONS

Preparation of Use Solution: Add ¼ ounce per gallon of water (200 ppm active) (or equivalent use dilution) to sanitize hard, non-porous exterior surfaces such as vinyl, plastic, sealed concrete, painted or sealed woodwork, and sealed stucco. Surfaces to be treated include house siding, decks, patios, walkways and driveways.

Application: Preclean surfaces. Apply solution with a brush, mop, cloth, sponge, hand pump trigger spray device, or with a low-pressure (less than 60 psi) airless sprayer so as to wet all surfaces thoroughly. Treated surfaces must remain wet for 3 minutes. Wearing suitable respiratory protective equipment and protective eyewear to control exposure to spray, pressure wash surfaces to thoroughly clean all treated areas using a high-pressure spray. Do not breathe spray. One-half gallon of diluted product will treat 200-300 sq ft of surface.

WATER TREATMENT DIRECTIONS FOR USE

Please read entire label and use strictly in accordance with precautionary statement and directions.

INDUSTRIAL WATER TREATMENT

(For use only on containers of 5 gallons or more)

Do not use water containing residues from use of Q-SAN to irrigate crops for food or feed.

Use of the product in either public/municipal or single or multiple family private/residential potable/drinking water systems is strictly prohibited. Use of the product in any cooling water system that discharges effluent within ¼ mile of either a public/municipal or single or multiple family private/residential potable/drinking water intake is strictly prohibited.

To control algae and bacterial slimes use Q-SAN as directed. For best results, slug feed. The frequency of addition of microbiocide needed depends on many factors. To optimize your use of Q-SAN, follow this procedure.

INDUSTRIAL AND/OR COMMERCIAL RECIRCULATING COOLING WATER TOWERS AND RECIRCULATING COOLING WATER SYSTEMS

1. **DOSING LOCATION:** Q-SAN is to be applied at a point in the system where it will be uniformly mixed, such as at the sump.

2. **DOSING CONDITION:** Q-SAN must be applied when the system is in jeopardy of being affected or after cleaning systems where efficiency is already impaired.

3. **METHOD OF APPLICATION:**

a. **INTERMITTEN OR SLUG METHOD**

Initial Dose: The dose must be poured into the sump of a system which is clean or in which growth is first noticed. Add 1-2 gallons of Q-SAN to each 5000 gallons of water contained in the system (20-40 ppm on an active quaternary basis). When heavy algae growth is present, system will have to be cleaned manually. Repeat until control is evident.

Subsequent Dose: Add 1-3 quarts of Q-SAN to each 5000 gallons of water contained in the system (5-15 ppm on an active quaternary basis). The dose must be poured into the sump. The above directions are to be followed once weekly or as needed. If algae growth is noticeable, apply the initial dose.

b. **MODIFIED INTERMITTEN METHOD**

Initial Dose: The dose must be poured into the sump of a system which is clean or in which growth is first noticed. Add 1-2 gallons of Q-SAN to each 5000 gallons of water contained in the system (20-40 ppm on an active quaternary basis). When heavy algae growth is present, system will have to be cleaned manually. Repeat until control is evident.

Subsequent Dose: Add 1-3 quarts of Q-SAN to each 5000 gallons of water contained in the system (5-15 ppm on an active quaternary basis). The dose must be poured into the sump. The above directions are to be followed once weekly or as needed. If algae growth is noticeable, apply the initial dose.

c. **CONTINUOUS METHOD**

Initial Dose: When the system is noticeably fouled, apply 1 gallon (20 ppm on an active quaternary basis) per 5000 gallons of water in the system.

Subsequent Dose: Maintain this treatment by starting a continuous feed of 1 quart (5 ppm on an active quaternary basis) per 5000 gallons of water lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.

BACTERIAL, FUNGAL AND ALGAE CONTROL IN RECIRCULATING AUXILIARY AND WASTE WATER SYSTEMS, AND PASTEURIZERS

Initial dose: Add Q-SAN at an initial dosage of 1-2 gallons per 5,000 gallons of system water (20-40ppm). Repeat until the desired level of control is achieved. Heavily contaminated systems must be pre-cleaned.

Subsequent dose: Once control is achieved, add maintenance dosages of 1-4 quarts per 5,000 gallons of system water (50-200 ppm) weekly or as needed to maintain control. Apply Q-SAN to a point in the system where it will be uniformly mixed and distributed, such as the tower sump.

SWIMMING POOLS

Q-SAN requires no special equipment for treating swimming pool water. The correct use dilution may be added directly to the pool in any spot or added to the water-circulation equipment. Q-SAN works best when added by itself directly to the pool water.

Ensure all pool equipment is working properly. Backwash the filter system following manufacturer's directions. Adjust pH between 7.2-7.6. Adjust chlorine residual to 1-3 ppm. In a chlorine treated pool, add stabilizer to establish a minimum level of 40-50 ppm to reduce the degradative effects of sunlight upon the chlorine residual. Check for metals and if present add stain and scale inhibitor to prevent staining of pool surface due to metals. Check chlorine residual and adjust to 1-3 ppm.

Add Q-SAN directly into pool by pouring around entire outside perimeter of pool. Allow the filter to run for at least six (6) hours after adding algaecide. During this period, swimmers should not be allowed into the water.

INITIAL APPLICATION FOR SWIMMING POOLS:

1. Backwash the filter thoroughly.
2. Vacuum algae debris to waste and thoroughly brush pool.
3. Add 1 gallon of Q-SAN to 50,000 gallons of water (26 ounces per 10,000 gallons) or ratio thereof.
4. Vacuum pool after 24 hours to remove dead algae.
5. If algae is still visible repeat dose (steps 3 & 4) as necessary until pool is free of visible algae.
6. Once algae are under control, clean filter and return to normal operation.

MAINTENANCE APPLICATION: Add 1 quart of Q-SAN of 50,000 gallons of water every 3-5 days.

If high temperatures prevail or pool has unusually heavy use, add maintenance dose more frequently.

BOOSTER APPLICATION: Add one quart of Q-SAN in 50,000 gallons of water after a heavy or prolonged rainfall or when there is a heavy bathing load.

The above directions should be followed even when the pool is not in use.

If algae growth is noticeable, apply initial dose.

VACATION TREATMENT: When you are going to be away for one week or more, add 24 ounces of Q-SAN per 10,000 gallons of water for every week unattended. Pour product around the edges of the shallow end of the pool, if shock is also being applied in the deep end of pool.

WINTERIZING TREATMENT: When swimming pool season is over, add 25.6 ounces of Q-SAN to 10,000 gallons of water left in pool. This dose helps provide a measure of control of algae growth during the winter months.

For persistent algae or slime producing organisms add 1 quart of Q-SAN in to the skimmer with the filter pump running. After one minute shut off pump and allow the system to remain off overnight. The following day, restart the filter pump and add 1 quart of Q-SAN to the pool. Run filter continuously for 24-48 hours brushing the sides and bottom of the pool frequently.

(Usage chart for one-gallon containers)

Swimming Pool Capacity Gallon of Water	Initial Treatment	Maintenance Dose Booster Dose
5,000	12.8 ounces	3.2 ounces
10,000	25.6 ounces	6.4 ounces
20,000	51.2 ounces	12.8 ounces
25,000	64.0 ounces	16.0 ounces
30,000	76.8 ounces	19.2 ounces
40,000	102.4 ounces	25.6 ounces
50,000	128.0 ounces	32.0 ounces

OR

(Usage chart for one-quart containers)

Swimming Pool Capacity Gallon of Water	Initial Treatment	Maintenance Dose Booster Dose
5,000	12.8 ounces	3.2 ounces
10,000	25.6 ounces	6.4 ounces

TO DETERMINE POOL CAPACITY

Rectangular Pools: Length (*times*) width (*times*) average depth (in feet) (*times*) 7.5 (*equals*) gallons.

Round and Oval Pools: Long diameter (*times*) short diameter (*times*) average depth (in feet) (*times*) 5.9 (*equals*) gallons

When Q-SAN is used as directed it will prevent development of *Chlorella pyrenoidosa* (green algae), *Phormidium inundatum* (black algae), *Phormidium retzi* (blue-green algae), *Lyngbya versicolor* (blue-green algae), and other swimming pool algae.

Q-SAN is compatible with many swimming pool chemicals and when used as directed it is not harmful to the metal paint, plastic or tile surfaces of the swimming pool.

Q-SAN when used as directed will help improve the appearance and cleanliness of the swimming pool water.

Q-SAN helps inhibit the growth of unsightly algae.

One gallon treats 50,000 gallons.

OUTSIDE SPAS/WHIRLPOOLS/HOT TUB BATHS

Initial Dose: Add 5.1 fluid ounces of Q-SAN per 2000 gallons of pool water. Initial dose is used upon filling of spa/whirlpool/hot tub bath.

Maintenance Dose: Add 1.3 fluid ounces of Q-SAN per 2000 gallons of water. Maintenance dose should be added at 3-5 day intervals. If high temperatures prevail or spa/whirlpool/hot tub bath has unusually heavy use, add maintenance dose more frequently. Drain and clean spa/whirlpool/hot tub bath at least once a month or as needed depending on bather load.

ALGAE CONTROL

When used as directed, Q-SAN is effective against algae. With a little experience, you will quickly recognize algae contamination as it starts. Algae should be killed immediately! Remember – algae can double or quadruple in growth every day. Algae are generally dead when it does not feel slick to the touch and the color has changed. However, algae do not always change color when killed.

GREENHOUSE GLASS: Spray or swab surface with a solution of 3 oz. of Q-SAN per 5 gallons of water (or equivalent use dilution). Allow to air dry. Wash off dead algae with water. Spray clean surface again with the solution. Do not rinse. To apply solution for sprayer applications, use as a coarse spray only.

HOUSE PLANTS: To control algae and cross contamination in terrariums, bubbles, etc., wipe inside of glass with a solution of 3 oz. of Q-SAN per 5 gallons of water (or equivalent use dilution). Lightly spray plants with same solution.

WALKWAYS: For heavy infestations, spray or swab surface with a solution of 3 oz. of Q-SAN per 5 gallons of water (or equivalent use dilution). Let stand for an hour or more then brush and wash away dead algae. Soak area again with the solution. Do not rinse. Q-SAN will inhibit the growth of algae on walkways. Allow to dry on the surface and repeat application when algae growth returns. To apply solutions for sprayer applications, use as a coarse spray only.

DIRECTIONS FOR ALTERNATE CONTAINERS/DELIVERY SYSTEMS

AUTOMATED DILUTION SYSTEM (DILUTION SYSTEMS TRADE NAME)

INSTRUCTIONS: Remove cap/spray nozzle from empty container. Fill empty container

with a newly prepared use-solution. Replace cap/spray nozzle. Place correct use-dilution label on newly filled container.

BAG-IN BOX CONTAINERS

How to use this package: This package is designed to be used with dilution control systems only. Open package and connect to dispense according to directions on the box.

TRIGGER SPRAYERS: Fill bottle from dispenser. Apply to surfaces according to directions above.

MOP BUCKETS: Fill bucket from dispenser. Set up "Wet Floor" signs. Mop floor surfaces as specified in directions above.

PACKETS (For pre-measured tear open packets)

(For Disinfection packet only) (Simply) (Tear) open and pour contents of packet into 5 gallons of water. Keep packets in box until ready to use.

(For Food Contact Sanitization packet only) (Simply) (Tear) open and pour contents of packet into 4 gallons of water. Keep packets in box until ready to use.

REFILLS

To Refill Concentrate From Large Containers Into Smaller Containers: Q-SAN may be used to fill and refill clean, properly labeled containers for dilution elsewhere within your facility. Make sure the small container has been cleaned, dried and properly labeled according to state and local regulations. Also make sure other items (funnels or hand pumps) are properly cleaned and dried. To refill, simply pour (or pump product) from the larger container directly into the smaller one being careful not to spill any product. Keep both containers sealed when not in use.

(If the container is greater than one gallon use the following storage and disposal statements.)

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE: Open dumping is prohibited. Store only in original container. Store in a dry place no lower in temperature than 50°F or higher than 120°F. Do not reuse empty container. Keep Q-SAN under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

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 DISPOSAL (Larger than 1 gal): Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. In addition, plastic containers may be disposed of by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(If container is one gallon or less use the following storage and disposal statements.)

STORAGE AND DISPOSAL

Store in original container in areas inaccessible to small children. Do not store on side. Avoid creasing or impacting of side walls. Do not reuse empty container. Wrap and discard in trash (or recycle).

PACKET DISPOSAL: Do not reuse. Discard empty container and put in trash.

(Note to Reviewer: The following statements should be considered as alternate statements at this time. However, they will be required on the label after 8/16/10 per the Container Standard Regulations. We are including the statements for review at this time because our customers are inquiring whether they can make these statements on their labels now.)

(OR)

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

(FOR USE ON NON-REFILLABLE CONTAINERS WITH HOUSEHOLD/RESIDENTIAL USES)

PESTICIDE STORAGE: Open dumping is prohibited. Store only in original container. Do not reuse empty container. If a leaky container must be contained within another, mark the outer container to identify the contents. Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep Q-SAN under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

PESTICIDE DISPOSAL/CONTAINER HANDLING: Non-refillable container. Do not reuse or refill this container. Triple rinse (or equivalent). Wrap and put in trash or offer for recycling if available.

Batch Code: *(Can be placed on container or label)*

(FOR USE ON NON-REFILLABLE CONTAINERS WITH NO HOUSEHOLD/RESIDENTIAL USES)

PESTICIDE STORAGE: Open dumping is prohibited. Store only in original container. Do not reuse empty container. If a leaky container must be contained within another, mark the outer container to identify the contents. Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep Q-SAN under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

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: Non-refillable container. Do not reuse this container to hold materials other than pesticides or diluted pesticides (rinsate). Triple rinse (or equivalent). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Offer for recycling for available or puncture and dispose in a sanitary landfill, or by other procedures approved by state and local authorities. If rinsate cannot be used, follow pesticide

disposal instructions. If not triple rinsed, these containers are acute hazardous wastes and must be disposed in accordance with local, state and federal regulations.

RESIDUE REMOVAL INSTRUCTIONS: *(For containers less than one gallon)*

Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

RESIDUE REMOVAL INSTRUCTIONS: *(For containers greater than one gallon)*

Triple rinse container (or equivalent) promptly after emptying. 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 this procedure two more times.

BATCH CODE: *(Can be placed on container or label)*

(FOR USE ON REFILLABLE CONTAINERS)

PESTICIDE STORAGE: Open dumping is prohibited. Store only in original container. If a leaky container must be contained within another, mark the outer container to identify the contents. Store pesticides away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Keep Q-SAN under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

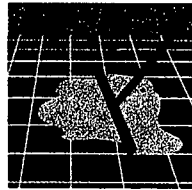
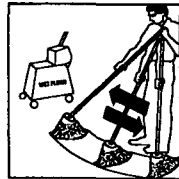
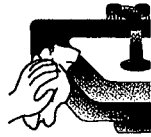
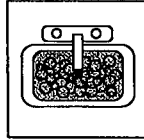
CONTAINER HANDLING: Triple rinse (or equivalent). Refill this container with Q-SAN only. Do not reuse this container for any other purpose.

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.

RESIDUE REMOVAL INSTRUCTIONS: Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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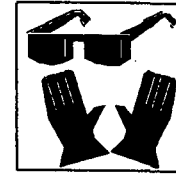
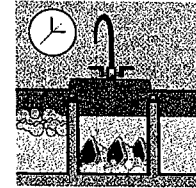
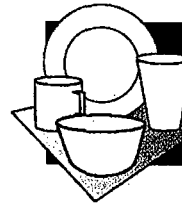
(Note to Reviewer: These icons have been requested by our customers and will appear on the label with the appropriate directions.)



WARNING
AVISO

**CHILDREN CAN FALL INTO BUCKET AND DROWN
KEEP CHILDREN AWAY FROM BUCKETS WITH EVEN A SMALL AMOUNT OF WATER**

**Miños pueden caer adentro de el balde y ahogarse.
Retiro los niños de el balde aunque solamente tenga un poco de agua.**



DISINFECTANT



DESINFECTANTE



KOSHER

FOUR OUNCE PACKET LABEL TO BE USED WITH MASTER CONTAINER LABEL FOR HOSPITAL DISINFECTION

FOR DISINFECTION

MIX EACH PACKET WITH 5 GALLONS OF WATER

Q-SAN

E.P.A. Reg. No. 46597-2 E.P.A. Est. No. 46597-GA-01

NET CONTENTS: 4.0 FLUID OZ.

ACTIVE INGREDIENTS:

Alkyl (C₁₄ 60%, C₁₆ 30%, C₁₂ 5%, C₁₈ 5%)
dimethyl benzyl ammonium chloride..... 5.0%
Alkyl (C₁₂ 68%, C₁₄ 32%)
dimethyl ethylbenzyl ammonium chloride..... 5.0%

INERT INGREDIENTS: 90.0%

TOTAL: 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

SEE OUTER CONTAINER FOR PRECAUTIONARY STATEMENTS AND USE DIRECTIONS.

DISPOSAL: Do not reuse container. Wrap and put in trash collection.

CHEMSTAR CORPORATION

120 Interstate West Parkway, Suite 100
Lithia Springs, GA 30122

800-327-0777

THREE OUNCE PACKET LABEL TO BE USED WITH MASTER CONTAINER LABEL FOR GENERAL DISINFECTION

FOR DISINFECTION

MIX EACH PACKET WITH 5 GALLONS OF WATER

Q-SAN

E.P.A. Reg. No. 46597-2 E.P.A. Est. No. 46597-GA-01

NET CONTENTS: 3.0 FLUID OZ.

ACTIVE INGREDIENTS:

Alkyl (C₁₄ 60%, C₁₆ 30%, C₁₂ 5%, C₁₈ 5%)
dimethyl benzyl ammonium chloride..... 5.0%
Alkyl (C₁₂ 68%, C₁₄ 32%)
dimethyl ethylbenzyl ammonium chloride..... 5.0%

INERT INGREDIENTS: 90.0%

TOTAL: 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

SEE OUTER CONTAINER FOR PRECAUTIONARY STATEMENTS AND USE DIRECTIONS.

DISPOSAL: Do not reuse container. Wrap and put in trash collection.

CHEMSTAR CORPORATION

120 Interstate West Parkway, Suite 100
Lithia Springs, GA 30122

800-327-0777

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**ONE OUNCE PACKET LABEL TO BE USED WITH MASTER
CONTAINER LABEL FOR FOOD CONTACT SANITIZER**

FOR FOOD CONTACT SANITIZER

MIX EACH PACKET WITH 4 GALLONS OF WATER

Q-SAN

E.P.A. Reg. No. 46597-2 E.P.A. Est. No. 46597-GA-01

NET CONTENTS: 1.0 FLUID OZ.

ACTIVE INGREDIENTS:

Alkyl (C₁₄ 60%, C₁₆ 30%, C₁₂ 5%, C₁₈ 5%)
dimethyl benzyl ammonium chloride 5.0%
Alkyl (C₁₂ 68%, C₁₄ 32%)
dimethyl ethylbenzyl ammonium chloride 5.0%

INERT INGREDIENTS: 90.0%

TOTAL: 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

SEE OUTER CONTAINER FOR PRECAUTIONARY STATEMENTS AND USE
DIRECTIONS.

DISPOSAL: Do not reuse container. Wrap and put in trash collection.

CHEMSTAR CORPORATION

120 Interstate West Parkway, Suite 100
Lithia Springs, GA 30122

800-327-0777

SECONDARY CONTAINER LABEL

(Note to Reviewer: This secondary container label will be used only when the product is diluted in accordance with the use directions.)

Q-SAN

E.P.A. Reg. No. 46597-2 E.P.A. Est. No. 46597-GA-01

The product in this container is diluted as directed on the pesticide
product label.

ACTIVE INGREDIENTS:

Alkyl (C₁₄ 60%, C₁₆ 30%, C₁₂ 5%, C₁₈ 5%)
dimethyl benzyl ammonium chloride 5.0%
Alkyl (C₁₂ 68%, C₁₄ 32%)
dimethyl ethylbenzyl ammonium chloride 5.0%

INERT INGREDIENTS: 90.0%

TOTAL: 100.0%

KEEP OUT OF REACH OF CHILDREN

~~Warning~~ **Danger**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. Keep Out of Reach of Children. Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through the skin. Do not get into eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

CONTAINER HANDLING: Triple rinse (or equivalent). Refill this container with Q-SAN only. Do not reuse this container for any other purpose.

Follow the directions for use on the pesticide label when applying Q-SAN. See product label for Storage and Disposal instructions.

CHEMSTAR CORPORATION

120 Interstate West Parkway, Suite 100
Lithia Springs, GA 30122

800-327-0777

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