

Re-Juv-Nal®

HILLYARD
ARSENAL®
16

A phosphate-free, pH neutral formulation designed to provide effective cleaning, deodorizing, and disinfection for hospitals, nursing homes, schools, food processing plants, food service establishments, restaurants, transportation terminals, office buildings, manufacturing facilities, lodging establishments, hotels, retail business, and athletic/recreation facilities, sports stadiums, amphitheaters and convention centers where housekeeping is of prime importance in controlling cross-contamination from treated surfaces. Active Ingredients: Octyl decyl dimethyl ammonium chloride 1.627%, Dioctyl dimethyl ammonium chloride 0.814%, Didecyl dimethyl ammonium chloride 0.814%, Alkyl (50% C14, 40% C12, 10% C16) dimethyl benzyl ammonium chloride 2.170%, Inert Ingredients 94.575%.

Features & Benefits

- Disinfectant/detergent cleaner with neutral pH.
- Leaves a pleasant scent.
- EPA registered disinfectant.

Efficacy

BACTERICIDAL ACTIVITY - At the 2 ounce per gallon dilution, Re-Juv-Nal demonstrates effective disinfectant activity against the organisms:

Pseudomonas aeruginosa PRD-10
Salmonella (choleraesuis) enterica
Staphylococcus aureus
Staphylococcus aureus (clinical isolate)
Bordetella bronchiseptica
Corynebacterium ammoniagenes
Enterobacter aerogenes
Enterobacter cloacae
Enterobacter cloacae (clinical isolate)
Enterococcus faecalis
Enterococcus faecalis (clinical isolate)
Escherichia coli
Escherichia coli (clinical isolate)
Fusobacterium necrophorum
Klebsiella pneumoniae subsp. pneumoniae
Lactobacillus casei subsp. rhamnosus
Listeria monocytogenes
Pasteurella multocida
Proteus mirabilis ATCC 9921
Proteus mirabilis ATCC 25933
Proteus vulgaris
Salmonella (paratyphi B) enterica
Salmonella (typhi) enterica
Salmonella (typhimurium) enterica
Salmonella (pollorum) enterica
Serratia marcescens
Shigella sonnei
Shigella flexneri Type 2b
Shigella dysenteriae
Staphylococcus aureus subsp. aureus
Staphylococcus epidermidis
Staphylococcus epidermidis (clinical isolate)
Streptococcus pyogenes (Clinical - Flesh Eating Strain BIRD M3)
Streptococcus pyogenes Group A
Xanthomonas maltophilia (clinical isolate)
Vancomycin resistant Enterococcus faecalis (VRE)
Methicillin resistant Staphylococcus aureus (MRSA)
Vancomycin intermediate resistant Staphylococcus aureus (VISA)

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Community Associated Methicillin resistant Staphylococcus aureus (CA- MRSA) NRS 123
Genotype USA400

Community Associated Methicillin resistant Staphylococcus aureus (CA-MRSA) NRS 384
Genotype USA300

FUNGICIDAL ACTIVITY - At the 2 ounce per gallon dilution, Re-Juv-Nal is fungicidal against the pathogenic fungi:

Trichophyton mentagrophytes
(Athlete's Foot Fungus)
Candida albicans

VIRUCIDAL ACTIVITY - Re-Juv-Nal when used on environmental, inanimate, hard, non-porous surfaces exhibits effective virucidal activity against:

HIV-1
HIV-2
Hepatitis B Virus (HBV)
Hepatitis C Virus (HCV)
Herpes Simplex Type 1 (causative agent of fever blisters)
Herpes Simplex Type 2 (genital)
Influenza A2/Hong Kong
Vaccinia
Rotavirus
Human Coronavirus (ATCC VR-740, Strain 229E)
SARS Associated Coronavirus
Rabies Virus
Bovine Viral Diarrhea Virus (BVDV)
Pseudorabies
Bovine Rhinotracheitis
Feline Leukemia
Feline Picornavirus
Canine Distemper Virus
Avian Influenza A Virus
Porcine Respiratory & Reproductive Syndrome Virus (PRRSV)
Kills Pandemic 2009 H1N1 Influenza A virus (formerly called swine flu)



Safety

See material safety data sheet and product label for safety information, handling and proper use.

HMIS

	Concentrate/RTU
Health	3/1
Flammability	0/0
Reactivity	0/0

Technical Specifications

Color	Red
Scent	Floral
Appearance	Clear Liquid
pH (concentrate)	6.00 - 7.00
Non-Volatile Matter	7.50 - 8.50%
Dilution Rate	1:64

Availability

Item	Pack
HIL0081606	4 - "F" Style 1 Gallon Containers
HIL0081622	6 - 1/2 Gallon Containers
HIL0081689	72 - 1 oz. Packets
HIL0081694	36 - 4 oz. Packets
HIL0081625	4 - 2.5 Liter Containers

Registrations

EPA Reg. No. 1839-169-1658

HILLYARD

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.
This product is not for use on critical and semi-critical medical device surfaces.

DISINFECTION - To disinfect inanimate, hard non-porous surfaces, add 2 ounces of Re-Juv-Nal per gallon of water. Apply solution with a mop, cloth, sponge, hand pump trigger sprayer or low pressure coarse sprayer so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes, then remove excess liquid. For sprayer applications, spray 6-8 inches from surface, rub with brush, sponge or cloth. Do not breathe spray mist. For heavily soiled areas, a pre-cleaning step is required.

BACTERICIDAL STABILITY OF USE-SOLUTION: Tests confirm that Re-Juv-Nal when diluted in hard water up to 400 ppm (as CaCO₃) remains effective against *Pseudomonas aeruginosa*, *Staphylococcus aureus* and *Salmonella* (choleraesuis) enterica for up to 1 month when stored in a sealed container such as a spray bottle at room temperature. If Re-Juv-Nal becomes visibly dirty or contaminated, the use-solution must be discarded and fresh use-solution prepared. Always use clean, properly labeled containers when diluting Re-Juv-Nal. Bactericidal stability of the use-solution does not apply to open containers such as buckets or pails.

To disinfect toilet bowls - Remove gross filth or soils from surfaces with bowl brush. Add 2 ounces of Re-Juv-Nal to the bowl water. Brush or swab the bowl completely using a scrub brush or toilet mop making sure to get under the rim. Let stand for 10 minutes and flush.

To disinfect food processing premises: Before using Re-Juv-Nal, food products and packaging materials must be removed from the area or carefully protected. For floors, walls, and storage areas, add 2 ounces of Re-Juv-Nal per gallon of water. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a mop, cloth, sponge, hand pump trigger sprayer or low pressure coarse sprayer so as to wet all surfaces thoroughly. Allow 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 restaurant (food service establishment) food contact surfaces: countertops, appliances, and tables, add 2 ounces of Re-Juv-Nal per gallon of water. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a cloth, sponge or hand pump trigger sprayer so as to wet all surfaces thoroughly. Allow the surface to remain wet for 10 minutes, then remove excess liquid and rinse the surface with potable water. Re-Juv-Nal cannot be used to clean the following food contact surfaces: utensils, glassware and dishes.

BACTERICIDAL ACTIVITY - At the 2 ounce per gallon dilution, Re-Juv-Nal demonstrates effective disinfectant activity against the organisms: *Pseudomonas aeruginosa* PRD-10, *Salmonella* (choleraesuis) enterica, *Staphylococcus aureus*, *Staphylococcus aureus* (clinical isolate), *Bordetella bronchiseptica*, *Corynebacterium ammoniagenes*, *Enterobacter aerogenes*, *Enterobacter cloacae*, *Enterobacter cloacae* (clinical isolate), *Enterococcus faecalis*, *Enterococcus faecalis* (clinical isolate), *Escherichia coli*, *Escherichia coli* (clinical isolate), *Fusobacterium necrophorum*, *Klebsiella pneumoniae* subsp. pneumoniae, *Lactobacillus casei* subsp. rhamnosus, *Listeria monocytogenes*, *Pasteurella multocida*, *Proteus vulgaris*, *Proteus mirabilis* ATCC 9921, *Proteus mirabilis* ATCC 25933, *Salmonella* (paratyphi B) enterica *Salmonella* (typhi) enterica *Salmonella* (typhimurium) enterica, *Salmonella* (pollorum) enterica, *Serratia marcescens*, *Shigella sonnei*, *Shigella flexneri* Type 2b, *Shigella dysenteriae*, *Staphylococcus aureus* subsp. aureus, *Staphylococcus epidermidis*, *Staphylococcus epidermidis* (clinical isolate), *Streptococcus pyogenes* (Clinical - Flesh Eating Strain BIRD M3), *Streptococcus pyogenes* Group A, *Xanthomonas maltophilia* (clinical isolate), Vancomycin resistant *Enterococcus faecalis* (VRE), Methicillin resistant *Staphylococcus aureus* (MRSA), Vancomycin intermediate resistant *Staphylococcus aureus* (VISA), Community Associated Methicillin resistant *Staphylococcus aureus* (CA-MRSA) NRS 123 Genotype USA400, Community Associated Methicillin resistant *Staphylococcus aureus* (CA-MRSA) NRS 384 Genotype USA300.

FUNGICIDAL ACTIVITY - At the 2 ounce per gallon dilution, Re-Juv-Nal is fungicidal against the pathogenic fungi, *Trichophyton mentagrophytes* (Athletes Foot Fungus) and *Candida albicans*. Apply solution with a cloth, sponge or hand pump trigger sprayer to hard, non-porous surfaces found in bathrooms, shower stalls, locker rooms, exercise facilities or other clean, hard non-porous surfaces commonly contacted by bare feet. Allow the surface to remain wet for 10 minutes, then remove excess liquid. Diluted product should be applied daily or more frequently with heavy facility use.

***VIRUCIDAL ACTIVITY** - Re-Juv-Nal when used on environmental, inanimate, hard, non-porous surfaces exhibits effective virucidal activity against HIV-1, HIV-2, Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), Herpes Simplex Type 1 (causative agent of fever blisters), Herpes Simplex Type 2 (genital), Influenza A2/Hong Kong, Vaccinia, Rotavirus, Human Coronavirus (ATCC VR-740, Strain 229E), SARS Associated Coronavirus, Rabies Virus, Bovine Viral Diarrhea Virus (BVDV), Pseudorabies, Bovine Rhinotracheitis, Feline Leukemia, Feline Picornavirus, Canine Distemper Virus, Avian Influenza A Virus, and Porcine Respiratory & Reproductive Syndrome Virus (PRRSV). Kills Pandemic 2009 H1N1 Influenza A virus (formerly called swine flu). Add 2 ounces of the product per gallon of water. For heavily soiled areas, a pre-cleaning step is required. Apply solution with a cloth, mop, sponge, hand pump trigger sprayer or low pressure coarse sprayer so as to wet all surfaces thoroughly. Allow the surface to remain wet for 10 minutes, then remove excess liquid.

KILLS HIV-1, HIV-2, HBV, and HCV ON PRE-CLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS in health care settings (hospitals, nursing homes) 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 or Type 2 (HIV-1 or HIV-2) (associated with AIDS), Hepatitis B Virus (HBV), and Hepatitis C Virus (HCV).

SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST HIV-1, HIV-2, HBV, and HCV OF SURFACES/OBJECTS SOILED WITH BLOOD/BODY FLUIDS.

PERSONAL PROTECTION: When handling items soiled with blood or body fluids, use disposable latex gloves, gowns, masks, and eye coverings.

CLEANING PROCEDURES: Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application of Re-Juv-Nal.

CONTACT TIME: Allow surface to remain wet for 10 minutes.

DISPOSAL OF INFECTIOUS MATERIALS: Blood and other body fluids must be autoclaved and disposed of according to local regulations for infectious waste disposal.

EFFICACY TESTS HAVE DEMONSTRATED THAT RE-JUV-NAL IS AN EFFECTIVE BACTERICIDE AND *VIRUCIDE AGAINST THE LISTED ORGANISMS IN WATER UP TO 400 PPM HARDNESS (AS CaCO₃) IN THE PRESENCE OF ORGANIC SOIL (5% BLOOD SERUM). RE-JUV-NAL IS AN EFFECTIVE FUNGICIDE AGAINST THE LISTED FUNGI IN WATER UP TO 200 PPM HARDNESS (AS CaCO₃) IN THE PRESENCE OF ORGANIC SOIL (5% BLOOD SERUM).

POULTRY AND SWINE PREMISE DISINFECTION

Site Preparation: The first step in any ongoing disinfection program must be the removal of gross contamination and debris. This is accomplished by 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.

Cleaning And Disinfection: For all general cleaning and disinfection, use 2 ounces of Re-Juv-Nal per gallon of water. Apply Re-Juv-Nal using a cloth, mop, or low pressure coarse sprayer so as to thoroughly wet surface to be disinfected. Allow to remain wet for 10 minutes and then let air dry. For heavily soiled areas, a pre-cleaning step is required. Prepare a fresh solution after each use.

APPLICATIONS AND USE DILUTION

Poultry And Swine Premise: Remove all animals and feeds from premises, trucks, cars, coops and crates. Remove all litter, droppings and manure from floors, walls and surfaces of facilities 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 2 ounces of Re-Juv-Nal per gallon of water. Saturate surfaces with the disinfecting solution for a period of 10 minutes. Ventilate buildings, coops and other closed spaces. Do not house animals 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. 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.

Hatcheries: Use 2 ounces of Re-Juv-Nal per gallon of water to treat the following hard non-porous surfaces: hatchers, setters, trays, racks, carts, sexing tables, delivery trucks and other hard surfaces. Leave all treated surfaces exposed to disinfectant solution wet for 10 minutes or more. Rinse with potable water before reuse. Then allow to air dry.

Vehicles: Clean all vehicles including mats, crates, cabs, and wheels with high pressure water and Re-Juv-Nal. Use 2 ounces per gallon to treat all vehicles. Leave all treated surfaces exposed to disinfectant solution wet for 10 minutes or more.

Veterinary Practice/Animal Care/Animal Laboratory/Zoos/Pet Shop/Kennels Disinfection Directions: For cleaning and disinfecting the following hard non-porous surfaces: equipment not used for animal food or water, utensils, instruments, cages, kennels, stables, catteries, etc. Remove all animals and feed from premises, animal transportation vehicles, crates, etc. Remove all litter, droppings and manure from floors, walls and surfaces occupied or traversed by animals. Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use-solution of 2 ounces of Re-Juv-Nal per gallon of water (or equivalent dilution) for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not house animals or employ equipment until treatment has been absorbed, set or dried.

Disinfection of Barber/Salon Tools Directions: Immerse pre-cleaned barber/salon tools (combs, brushes, razors, manicure/pedicure tools, clippers, scissors, trimmer blades) in a use-solution (or equivalent dilution) of 2 ounces of Re-Juv-Nal per gallon of water for at least 10 minutes. Rinse instruments thoroughly and dry before reuse. A fresh use-solution must be prepared daily or more often if the use-solution becomes visibly dirty. **NOTE:** Plastics may remain immersed until ready to use. Stainless steel shears and instruments must be removed from the use-solution after 10 minutes, rinsed, dried and kept in a clean, non-contaminated receptacle. Prolonged immersion may cause damage to stainless steel or metal instruments.

DEODORIZATION - To deodorize, apply Re-Juv-Nal as indicated under the heading DISINFECTION.

MILDEWSTAT - To control mold and mildew (*Aspergillus niger*) and the odors they cause on pre-cleaned, hard, non-porous inanimate surfaces, add 2 ounces of Re-Juv-Nal per gallon of water. Apply solution with a cloth, mop, sponge or hand pump trigger sprayer making sure to wet all surfaces completely. Let air dry. Prepare a fresh solution for each use. Repeat application at weekly intervals or when mildew growth appears.

To Control Mold and Mildew on Large, Inflatable, Non-Porous Plastic and Rubber Structures (animals, promotional items, moonwalk, slides, obstacle course play equipment, exercise equipment, and wrestling mats): Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use-solution of 8 ounces of Re-Juv-Nal per 4 gallons of water (2 ounces per gallon of water) (850 ppm active quaternary) (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.