





**6065 Thimens Ville St-Laurent
(Quebec) Canada
H4S 1V8**

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Who We Are

 **atomes** is a Canadian company located in Quebec specialized in the manufacturing of Specialty chemical products and sanitizers (disinfectants).  **atomes** is a leader in manufacturing Biotechnology-based products such as Neutral degreasers, stable enzymatic products and stable bacterial products.

Where We Are

 **atomes** 6065 Thimens, VILLE SAINT LAURENT (QUÉBEC) Canada
H4S 1V8
Telephone : (514) 745 2597 FAX : (514)745-5176

What We Do

We have a complete product line of chemical products and sanitizers (disinfectants) including:

- Non foaming acidic cleaners.
- Acidic foaming cleaners.
- Neutral degreasers.
- Non foaming alkaline degreasers
- Foaming alkaline degreasers
- Non foaming chlorinated alkaline cleaners
- Foaming chlorinated alkaline cleaners
- Quaternary ammonium chloride based sanitizers and chlorinated sanitizers.
- Liquid anti-bacterial Hand Soap.
- Detergent and rinse for automatic dishwashers
- Water treatment specialty chemicals

Our products are approved from **Health Canada** and **Agriculture Canada (Canadian Food Inspection Agency)**. Our Sanitizers hold **DIN** number.

We have a complete product line of **Biotechnology-based products** including:

- Neutral degreasers.
- Stable Enzymatic products
- Stable Bacterial products

These Biotechnology-based products are:

- Neutral
- Biodegradable
- Environmentally-friendly
- Safe on Surfaces
- Safe for users
- Non-toxic



What Services We Offer

- HACCP Procedures
- Training « Washing and Sanitation »
- Training « Microbiology and composition of cleaners »
- Test Kits and procedures to determine the concentration of cleaners and sanitizers.
- Design specific products to satisfy your specific needs (Your Product of Choice).
- Microbiological analyses and Bacterial count on surfaces

Industries We Serve

- Food & Beverage Processing establishments
- Hospitals
- Restaurants
- Buildings, schools & Universities
- Supermarkets
- Specialized industries: Water treatment, boilers, Grease traps, drains, Septic systems treatment, water decontamination and Odour control.
- Water and wastewater treatment
- Pulp and Paper



ATO QUAT

(DIN#02243658)

(page 1)

Quaternary ammonium based disinfectant

DESCRIPTION

ATO QUAT (DIN#02243658) is a foaming **disinfectant** that could be used by circulation or manual application. Whenever disinfection is required, **ATO QUAT** will do excellent work economically.

APPLICATION

Do not mix with soap. Apply or let soak on clean surfaces for 3 minutes minimum.

Disinfection: 5mL/L of water provide 500 ppm of active quaternary ammonium. Rinse with abundant potable water.

Sanitizing: 2mL/L of water provide 200 ppm of active quaternary ammonium. Do not rinse if the concentration is equal or below 200 ppm.

PROPERTIES

Appearance: Clear liquid

Odor: Pleasant

pH (as is): 7.00 ± 1.00

Specific gravity @ 25°C: 0.985 ± 0.050

INGREDIENTS

Contains: 10% N-Alkyl dimethyl benzyl ammonium chloride



ATO QUAT

(DIN#02243658)

(page 2)

Quaternary ammonium based disinfectant

ATO QUAT is a wide spectrum disinfectant and is efficient against : virus, bacteria, yeast, mold and algae. At a concentration of 0.2% (2 ml / Liter), **ATO QUAT** is approved by **Health Canada** and **Agriculture Canada** without rinse with water. **ATO QUAT** belongs to a family of Quaternary compounds that are environmentally friendly.

VIRULICIDAL – BACTERICIDAL – FUNGICIDAL – ALGICIDAL

MICROBES

Aerobacter aerogenes
Bacillus aerus, var. mycoides
Bacillus subtilis
Brevibacterium ammoniagenes
Brucella abortus
Escherichia coli
Klebsiella pneumoniae
Lactobacillus casei
Listeria monocytogenes
Monilia albicans
Mycobacterium amegmatis
Neisseria catarrhalis
Pasteurella multocida
Penicillium luteum
Penicillium notatum
Pityrosporum ovale
Proteus vulgaris
Pseudomonas aeruginosa PRD-10
Salmonella gallinarum
Salmonella pullorum
Salmonella typhimurium
Salmonella schottumelleri
Salmonella typhosa
Salmonella choleraesuis
Shigella sonnei
Staphylococcus aureus
Streptococcus pyogenes C-203
Streptococcus fecalis
Streptococcus viridans
Streptococcus viridans
Trichophyton interdigitale
Saccharomyces cerevisiae
Pityrosporum ovale



ATO QUAT

(DIN#02243658)

(page 3)

Quaternary ammonium based disinfectant

BACTERICIDAL, FUNGICIDAL and ALGICIDAL Action :

Staphylococcus aureus
Escherichia coli
Citrobacter freundii
Klebsiella pneumoniae
Entérobacter aerogenes
Proteus vulgaris
Bacillus subtilis
Pseudomonas aeruginosa
Saccharomyces cerevisiae
Candida albicans
Oidium lactis
Aspergillus niger
Penicillium funiculosum
Trichophyton mentagrophytes
Epidermophyton floccosum
Microsporum canis
Microsporum gypseum

Cladosporium herbarum
Aureobasidium pullulans

ALGICIDAL :

Chlamydomonas
Chlorella vulgaris
Scenedesmus
Kirchneriella
Nostoc



ATO QUAT

(DIN#02243658)

(page 4)

Quaternary ammonium based disinfectant

BIOLOGICAL PROPERTIES

Phenol Coefficients

Phenol Coefficients of **ATO QUAT** were determined by the official A.O.A.C procedure

10- Minute Killing Dilution

Organism Bacteria	Dilution of AtoQuat in water to get the 10 minute killing	Concentration of AtoQuat (ml/L) to kill in 10 minutes	ppm of AtoQuat to kill the microbe in 10 minutes	Phenol Coefficient
<i>Brucella abortus</i>	1/5088	0.20 ml/L	20 ppm	370
<i>Escherichia coli</i>	1/3375	0.30 ml/L	30 ppm	390
<i>Klebsiella pneumoniae</i>	1/3125	0.32 ml/L	32 ppm	278
<i>Lactobacillus casei</i>	1/13125	0.08 ml/L	8 ppm	1050
<i>Listeria monocytogenes</i>	1/9000	0.11 ml/L	11 ppm	720
<i>Mycobacterium amegmatis</i>	1/2625	0.38 ml/L	38 ppm	309
<i>Neisseria caiarrbalis</i>	1/2163	0.46 ml/L	46 ppm	221
<i>Pasteurella multocida</i>	1/6763	0.14 ml/L	14 ppm	492
<i>Proteus vulgaris</i>	1/1500	0.66 ml/L	66 ppm	171
<i>Pseudomonas aeruginosa PRD-10</i>	1/1750	0.57 ml/L	57 ppm	200
<i>Salmonella gallinarum</i>	1/3500	0.28 ml/L	28 ppm	300
<i>Salmonella pullorum</i>	1/3125	0.32 ml/L	32 ppm	278
<i>Salmonella typhimurium</i>	1/2500	0.40 ml/L	40 ppm	250
<i>Salmonella schottumelleri</i>	1/7500	0.13 ml/L	13 ppm	630
<i>Salmonella typhosa</i>	1/5625	0.18 ml/L	18 ppm	500
<i>Shigella sonnei</i>	1/3125	0.32 ml/L	32 ppm	313
<i>Staphylococcus aureus</i>	1/5625	0.18 ml/L	18 ppm	750
<i>Streptococcus fecalis</i>	1/18750	0.05 ml/L	5 ppm	2150
<i>Streptococcus pyogenes C-203</i>	1/3125	0.32 ml/L	32 ppm	313
<i>Streptococcus viridans</i>	1/8750	0.11 ml/L	11 ppm	778
FUNGI				
<i>Saccharomyces cerevisiae</i>	1/6250	0.16 ml/L	16 ppm	500
<i>Pityrosporium ovale</i>	1/4375	0.22 ml/L	22 ppm	350



CAUSTI FOAM

Concentrated Foaming Degreaser

DESCRIPTION

CAUSTI FOAM is the product of choice for heavy duty degreasing, and cleaning efficiency. **CAUSTI FOAM** is a multi-purpose cleaner for the general maintenance of your surfaces, walls, floors, etc. **CAUSTI FOAM** is also ideal for smoke house, for grease deposits and carbonised proteins.

APPLICATION

For general cleaning, dilute 2-5 oz/gal. of water. To clean floors, use a concentration of 4-6 oz/gal. of water. **CAUSTI FOAM** is also an excellent degreaser, use 6oz/gal. of water to clean smoke and to remove grease deposits and carbonised proteins.

PROPERTIES

Appearance: Clear yellowish liquid

pH (1% solution): 12.50 ± 1.00

Specific gravity @ 25°C: 1.235 ± 0.050



CLR HF

Calcium – Lime – Rust

Acidic foaming cleaner

For scale and Rust

DESCRIPTION

CLR HF is a high foaming acid for manual cleaning that can be used for soaking or manual applications of food processing plants. **CLR HF** removes scale and residue from all types of production equipment.

APPLICATION

CLR HF is used at a concentration 50-150 mL/L (8-24 oz/gal.) of warm water. Let soak and/or apply with an appropriate brush.

PROPERTIES

Appearance: Clear liquid

pH (1% solution): 2.50 ± 1.00

Specific gravity @ 25°C: 1.020 ± 0.050



CLR HF

Calcium – Lime – Rust – Highly – Foaming Acidic foaming restroom cleaner For scale, Rust and Organics

DESCRIPTION

CLR HF is a high concentrated blend of inorganic acid, solvent, detergents, surfactants and rinse additives specifically formulated to keep toilet bowls and urinals bright and sparkling clean. **CLR HF** is based on a food grade phosphoric acid that cleans and brightens bowls, urinals, porcelain and tile, as well as stainless steel, brass, chrome, bronze, fibreglass, copper, etc.

ADDITIONAL USAGE

CLR HF can be used also in food processing establishments and restaurants for easy removal of scale, lime, rust and stains. In addition, the solvents make **CLR HF** a strong detergents to remove organic materials such as protein deposits, meats, fats, oils, sugars, et. **CLR HF** is also used in showers, pool, spa, kitchen on soiled coffee urns, steam tables, drinking fountains, etc.

APPLICATION

Bowls and Urinals: Open top and apply directly to surface to be cleaned. If using a cleaning mop or brush, apply liberally 1 to 2 ounces to mop or brush and then swab area to be cleaned. Allow to remain momentarily and then flush.

PROPERTIES

Appearance: Clear liquid; pH (1% solution): 2.50±1.00

ADVANTAGES

- Does not contain the traditional Hydrochloric acid that is highly corrosive to metal and human eyes, skin and nose.
- Specifically designed to address environmental concerns, **CLR HF** is readily biodegradable
- Not only an acid formulation for inorganic and thus remove organic deposits
- Approved by Health and Agriculture Canada



CLR NF

Calcium – Lime – Rust

Non-foaming acidic cleaner

For scale and Rust

DESCRIPTION

CLR NF is a non foaming acid cleaner designed for C.I.P (cleaning in place) systems. **CLR NF** removes scale and residue from all types of production equipment.

APPLICATION

CLR NF is used at a concentration of 0.5-2.0% for cleaning in place. A concentration of 5.0% is recommended for manual cleaning. Temperatures in excess of 50°C should be avoided when using this chemical.

PROPERTIES

Appearance: Clear liquid

pH (1% solution): 2.00±1.00

Specific gravity @ 25°C: 1.442±0.050



EXTRA KLIN

Dishwashing detergent

DESCRIPTION

EXTRA KLIN is a powerful and economical highly-foaming dishwashing detergent. **EXTRA KLIN** is used for manual washing of pots and pans.

APPLICATION

MANUAL: For manual washing of pots and pans, the suggested concentration is 1 part for 10 parts of water. For food plant use, food contact surfaces should be rinsed with abundant potable water before re-use. Do not contaminate food products.

PROPERTIES

Appearance: Clear yellow liquid

Odor: Citrus

pH (as is): 9.00 ± 1.00

Specific gravity @ 25°C: 1.020 ± 0.050



FOR-OVEN

Heavy-duty foaming degreaser for carbonised organic deposits

DESCRIPTION

FOR-OVEN is a heavy duty degreaser specially formulated to dissolve, solubilise and remove baked-on oil, grease and carbonized matter attached to **Grills, Oven** and **Frying Pans**.

APPLICATION

GRILLS: Pre-heat the surface to a temperature above 80°C. Spray on **FOR-OVEN** as is and give it 5 minutes to penetrate encrusted soils. Scrape-off with scraper and rinse with potable water.

OVEN: Dilute **FOR-OVEN** to a concentration of 25-40%, spray on all surfaces, let it react for 5 minutes and rinse off with potable water.

FRYING PANS: Remove excess grease with hot water. Add 20% solution of **FOR-OVEN** and let it boil for 5 minutes then rinse with potable water.

PROPERTIES

Appearance: Colorless liquid

pH (as is): 12.50±1.00



ORA

Heavy-duty foaming degreaser

DESCRIPTION

ORA is a citrus-scented, concentrated liquid cleaner. **ORA** is the product of choice for heavy-duty degreasing and cleaning efficiency. **ORA** is a stable product which can be used safely on all types of surfaces, including vinyl and leather.

DIRECTIONS FOR USE

ORA is a new biotechnology product that replaces the harsh corrosive degreasers found in the market place. **ORA** can be used in cleaning industrial plants and machines as well as household furniture and floors. The concentration will depend on the type of soiling. For heavy-duty cleaning (i.e., grease, oil, floors, etc.,) use at a concentration of 5%. For automotive parts, engines, transmissions and housings, use at a concentration of 10%.

FOAM APPLICATION: For optimal results, use **ORA** with high pressure FOAMER. For general cleaning of walls, tables, chairs, etc., use at a concentration of 3%.

PROPERTIES

Appearance: Clear orange liquid

Odour: Citrus

pH (1% solution): 9.50 ± 1.00

Specific gravity @ 25°C: 1.010 ± 0.010

Solubility: Complete



PERLY

Anti-bacterial hand soap

DESCRIPTION

PERLY is an anti-bacterial, viscous, highly foaming hand cleaner. **PERLY** a combination of various surfactants. It is a rapidly dispersing liquid cleanser which leaves the hands soft and smooth.

APPLICATION

PERLY can be conveniently used from the dispenser. 1/6 oz. - 1/4 oz. should be adequate for cleaning hands.

PROPERTIES

Appearance: Viscous opaque white liquid

Odor: Pleasant

pH (as is): 7.00 ± 1.00

Specific gravity @ 25°C: 1.000 ± 0.050

Wetting: Rapid and powerful

Solubility: Instant and complete



CHERRY

Odor Control

Deodorant containing anti-microbial agents

DESCRIPTION

CHERRY has a concentrated cherry scent. **CHERRY** eliminates malodors. In addition, **CHERRY** cleans different types of surfaces. Apply **CHERRY** in toilets, kitchens, etc. to remove malodors and leave a pleasant cherry scent.

PROPERTIES

Appearance: Red liquid

Odour: Cherry

pH: Neutral (6-8)

APPLICATION

Apply as is to give a pleasant odor and sanitize. For food plant use, food contact surfaces should be rinsed with abundant potable water before re-use. Do not contaminate food products.



CITRUS

Odor Control

Deodorant containing anti-microbial agents

DESCRIPTION

CITRUS has a concentrated citrus scent. **CITRUS** eliminates malodors. Apply **CITRUS** to mask the odor of fish and other bad odors. To be used in supermarkets, restaurants, buildings, etc.

PROPERTIES

Appearance: Yellowish liquid

Odour: Citrus

pH: Neutral (6-8)

APPLICATION

Apply as is to give a pleasant odor and sanitize. For food plant use, food contact surfaces should be rinsed with abundant potable water before re-use. Do not contaminate food products.



AtoQuat 2

Odor Control For Garbage Container Deodorant containing anti-microbial agents

DESCRIPTION

AtoQuat 2 has a concentrated apple scent. **AtoQuat 2** masks and eliminates malodors in garbage containers, drains, etc.

PROPERTIES

Appearance: Red liquid

Odour: Red Apple

pH: Neutral (6-8)

APPLICATION

Apply as is to give a pleasant odor and sanitize. Use via a fogger around 500 ml in a day.



RINSY

Reduces surface tension For Industrial Dishwashers

DESCRIPTION

RINSY is a rinse additive for automatic dishwashers. **RINSY** is a combination of liquid surfactants that reduce the surface tension of water, resulting in even and rapid water sheeting. With **RINSY** glasses, utensils, and dishes will be spotless.

APPLICATION

Rinse additive: **RINSY** can be added automatically to rinse water. Only 50-300ppm is sufficient to reduce the surface tension of water.

PROPERTIES

Appearance: Blue liquid

Odor: Bland

pH (as is): 7.00 ± 1.00

Specific gravity @ 25°C: 1.000 ± 0.050



CHLORAT NF

Liquid alkaline chlorinated non-foaming cleaner For Industrial Dishwashers

DESCRIPTION

CHLORAT NF is a special cleaner for automatic dishwashers. **CHLORAT NF** was engineered as a chlorinated alkaline cleaner. It is a non foaming cleaner.

APPLICATION

GENERAL CLEANING: use at 0.5%-2% solutions, circulate for 10-20 minutes at 60°C.

For specific uses, follow Company Representative's instructions and methods of use.

PROPERTIES

Appearance : Clear yellowish liquid

pH (1% solution):12.00±0.50

Specific gravity @ 25°C : 1.220 ± 0.010

Available chlorine: (min.) 2.0%

Solubility: Instant and complete



VITREX

Neutral Glass cleaner

DESCRIPTION

VITREX is a liquid glass cleaner. It is a neutral cleaner. In addition, it does not contain vinegar or ammonia. **VITREX** can be used to clean all types of surfaces. **VITREX** is very efficient not only on glass and mirrors but also on nickel, tiles, vinyl, etc.

APPLICATION

Apply **VITREX** as is on the surface to be cleaned, then wipe with paper towel, cloth, a sponge, etc.

PROPERTIES

Appearance: Light blue liquid

Odor: Alcohol

pH (as is): 7.00 ± 1.00

Specific gravity @ 25°C: 1.000 ± 0.050



PINY

Medium foaming degreaser – Ideal for floors

DESCRIPTION

PINY is a general floor cleaner. It is a heavy duty foaming cleaner that is ideal for the removal of grease, oil, etc.

APPLICATION

For a general floor cleaner, the suggested concentration is 1 to 5% in water (40°C-50°C).

PROPERTIES

Appearance: Red liquid

Odor: Mild

pH (as is): $>12.00 \pm 1.00$

Specific gravity @ 25°C: 1.020 ± 0.050



BOIL KLIN

Boiler Water Treatment Scale & Corrosion Inhibitor


DESCRIPTION

BOIL KLIN is a concentrated blend of chemicals designed to prevent deposition and corrosion in low and medium pressure boilers, which have low levels of make-up. **BOIL KLIN** contains diverse anti-corrosion agents and a neutralizing amine to provide corrosion protection in both the boiler and the condensate system. Diverse sequestering and chelating agents are included to disperse any scale forming materials that may enter into the boiler water.

BENEFITS

- Easy to administer single product
- Prevents boiler corrosion
- Concentrated formula
- Economical
- Simple to test product
- Prevents scale deposition

DOSAGE

The dosage of **BOIL KLIN** will vary depending on plant conditions. Specific recommendations, can be provided by your  **atomes** representative.

FEEDING

BOIL KLIN may be fed directly to the boiler or be added to either the feed water or condensate storage tanks. No special materials of construction are required for the chemical feed system.

PRODUCT SPECIFICATIONS

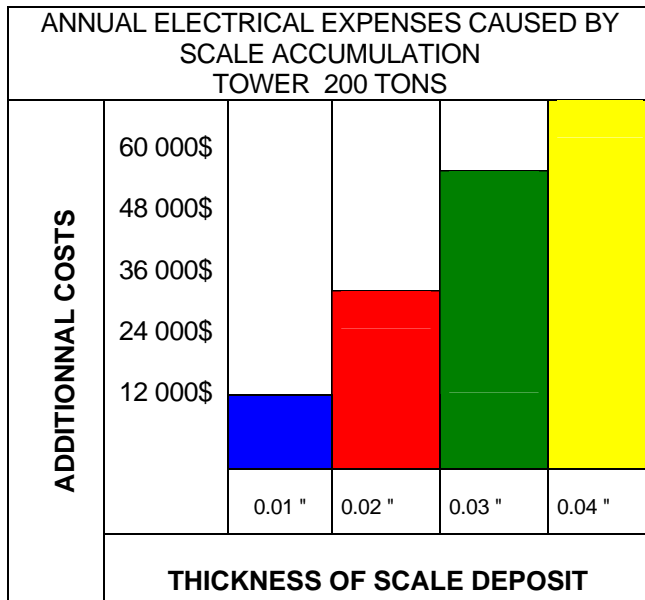
- Specific Gravity: 1.125
- Freezing Point: Not available
- Appearance: Clear liquid
- Odour: Amine
- pH (1%): 11.50
- Flash Point: >95°C



BOIL KLIN

SCALE AND CORROSION INHIBITOR

BOIL KLIN helps you to keep your water free of solids and impurities in order to increase the efficiency of your equipments.



Cooling tower of 200 tons that operates 24 hours per day with a 70% charge. It consumes 2600 kWh per day. And 0.075\$ per kWh. The electrical costs daily are 195,00\$

LOSS OF CALORIFIC TRANSFER CAUSED BY SCALE DEPOSITS	
Thickness of scale	Efficiency loss
0.006 "	30%
0.012 "	45.9%
0.024 "	63.9%
0.036 "	71.8%

***BOIL KLIN is a unique water treatment.....
One product, One operation!***



DE DRAIN

Liquid plumbing cleaner

DESCRIPTION

DE DRAIN is an alkaline liquid plumbing cleaner. **DE DRAIN** dissolves all organic matter, food residues, hair, grease, wood, soap, cloth, etc. that clog drains, plumbing, sink traps, toilet, urinals, sewers, etc. **DE DRAIN** is safe to use on all plumbing composed of iron, copper, brass, glass, and plastic pipes.

APPLICATION

Use as is. Let the product in contact with the organic materials for 10 minutes, then rinse with abundant water.

PROPERTIES

Appearance: Brownish liquid

pH (as is): 14.00 ± 1.00

Specific gravity @ 25°C: 1.030 ± 0.050

INGREDIENTS

Contains: Potassium hydroxide and gluconate.



EVOLUTION

Neutral foaming degreaser

DESCRIPTION

EVOLUTION is a proprietary blend of surfactants having wetting, penetrating and cleaning properties. It is very effective in removing grease on hard surfaces. The efficacy of **EVOLUTION** may be seen within few minutes after its application.

BENEFITS

Neutral product
Biodegradable
Environmentally friendly
Safe to handle.
Removes grease efficiently
Eliminates harsh and dangerous cleaning chemicals and solvents.

APPLICATION

Use **EVOLUTION** at a concentration of 1 to 5%. Spray **EVOLUTION** on the surfaces to be cleaned. Let it stay for at least 10 to 30 minutes then rinse with water at high pressure.

PROPERTIES

pH (as is): 7.00 ± 0.50
Specific gravity @ 25°C: 1.000 ± 0.050
Solubility: Complete



SOL KLIN

Neutral Cleaner & Sanitizer

FOAM KLIN is a liquid foaming cleaner formulated to clean and sanitize surfaces in contact with food found in dairies, wineries, breweries, and food, beverage and meat processing and packaging plants.

DIRECTIONS FOR USE

Use **FOAM KLIN** at a concentration of 6% to 10%. This dilution will provide **600** to **1000** active ppm of quaternary ammonium chloride. This dilution controls microorganisms such as **virus, bacteria, yeast and mold.**

Let this dilution be in contact with surfaces for at least 15 to 30 minutes then rinse with abundant potable water.

PROPERTIES

Appearance: Clear yellowish liquid

Odour: Pleasant

pH : Neutral

Specific gravity @ 25°C: 1.150±0.050

Solubility: Complete



BIO CULTURE

MULTIPLE SPORE BLEND OF BACTERIA

For Drain line, grease trap, odor control, Septic and waste treatment

DESCRIPTION

BIO CULTURE is a Multiple Spore Blend of Bacteria that Control Odors, Remove Organic Waste Compounds and Provides Quick Cleaning Action. **BIO CULTURE** is approved by Health Canada and Agriculture Canada. **BIO CULTURE's** innovative Multiple Spore Blend can be used to design environmentally safe solutions for many types of organic wastes.

The select blend of biostrains in **BIO CULTURE** specifically promote optimum enzymatic activity of Protease, Lipase, Amylase and Cellulase, and provides outstanding breakdown of protein, Starch, carbohydrates, fats, Oils and Grease.

APPLICATIONS

BIO CULTURE is designed to provide exceptional performance in Drain line, grease trap maintenance, odor control, Septic and waste treatment.

CHARACTERISTICS

Bacteria Count :	54 X 10⁶ cfu/ml
Bacteria Type :	Blend of <i>Bacillus</i> Spore
Enzyme Production :	Lipase, Protease, Amylase and Cellulase
Bacterial Pathway :	Aerobic and Facultative Anaerobic

PERFORMANCE

- . Accelerated enzymatic degradation – synergistic action allows the multiple spore blend to work faster and more effectively.
- . Superior germination and outgrowth – results in increased bacterial activity in a variety of organic waste applications.
- . Enhanced aerobic and anaerobic performance ideal for applications subject to aerobic and anaerobic environments.



BIO CULTURE

BLEND OF BACTERIA

**For Drain line, grease trap, odor control,
Septic and waste treatment**

DESCRIPTION

BIO CULTURE is a bacterial formulation designed to improve waste degradation in septic tanks and eliminate odors due to organic buildup.

BIO CULTURE is a blend of microorganisms that collectively produce enzymes for the degradation of fats, oils, proteins, starch and carbohydrates.

BIO CULTURE is a synergistic blend of highly specialized and selectively adapted spores and vegetative microorganisms, designed specifically to provide accelerated degradation of difficult to degrade organic compounds. The microorganisms in **BIO CULTURE** were selected based on each strain's superior enzymatic activity against substrates such as fats, oils, grease, protein, starch and carbohydrates. This consortium of microorganisms also exhibits exceptional organic degradation in both aerobic and anaerobic environments. It degrades also tissue, detergents, fats, oils and grease.

CHARACTERISTICS


- High enzyme production of: Lipase, Protease, Amylase and Cellulase.
- Blend of *Bacillus* spores and vegetative microorganisms
- Grease biodegradation outperforms other competitive formulations in laboratory and field studies.
- Superior germination and outgrowth results in increased bacterial activity in a variety of organic waste applications.
- Accelerated enzymatic degradation allows the microbial consortium to work faster and more effectively.
- General organic waste degrader.
- Enhanced aerobic and anaerobic performance, designed for applications subject to aerobic and anaerobic environments.



BIO CULTURE

Multiple Spore Blend for Odor Control – Quick Cleaning Action – Organic Removal

BENEFITS

- Approved by Health Canada
- Approved by Agriculture Canada (Canadian Food Inspection Agency)
- Components are listed on the Canadian Domestic Substances List (DSL) 
- Designed to provide an environmentally safe solutions for many types of organic wastes and odor problems.
- Its biostrains specifically promote optimum enzymatic activity of protease, lipase, amylase and cellulase, and provides outstanding breakdown of protein, starch, carbohydrates, fats, oils and grease.

APPLICATIONS

BIO CULTURE is designed to provide exceptional performance across multiple applications:

- Drain line and grease trap maintenance and odor control
- Septic and waste treatment
- Bathroom cleaner and deodorizer
- Carpet and fabric care – odor and stain removal of milk, vomit, urine, feces, blood, coffee, wine, etc.


PRODUCT CHARACTERISTICS

Bacteria count:	5.4 x 10 ⁷ CFU/ml
Bacteria type:	Blend of <i>Bacillus</i> spores
<i>Salmonella/Shigella</i>	Negative
Stability	2 years at 2°C to 35°C (35°F-95°F)
Enzyme Production	Lipase, Protease, Amylase and Cellulase
Bacterial Pathways	Aerobic & facultative anaerobic
pH range	5.0 –9.8
Temperature range	3°C to 63°C (38°F-145°F)

CHARACTERISTICS

- High enzyme production of: Lipase, Protease, Amylase and Cellulase.
- Grease biodegradation outperforms other competitive formulations in laboratory and field studies.
- Superior germination and outgrowth results in increased bacterial activity in a variety of organic waste applications.
- Accelerated enzymatic degradation – Synergistic action allows the multiple spore blend to work faster and more effectively.
- General organic waste degrader.
- Enhanced aerobic and anaerobic performance, designed for applications subject to aerobic and anaerobic environments.

DOSAGE

The dosage of **BIO CULTURE** will vary depending on the specific application. Specific recommendations, can be provided by your  **atomes** representative.



SOLID

Caustic free biodegradable cleaner

Unique to  atomes

DESCRIPTION

SOLID is a powdered cleaner formulated specifically for breweries. **SOLID** is used to clean surfaces in contact with food, reservoirs, C.I.P. evaporators, fillers, aseptic equipment and pasteurisers. **SOLID** can be used also in dairies, wineries, food-processing, beverage and meat processing and packaging plants.

DIRECTIONS FOR USE

Use **SOLID** at a concentration of 1 to 5%. Dilute 10 to 50 g **SOLID** in 1 liter water.

Let it circulate for at least 10 to 30 minutes then rinse with abundant potable water.

PROPERTIES

Appearance: White powder

Odour: Mild

pH (1% sol.): 10.00 ± 0.50

Specific gravity @ 25°C: 1.350 ± 0.050

Solubility: Complete



ACI QUAT

DIN#02244321

LIQUID DISINFECTANT FOR HARD SURFACES

Didecyl Dimethyl Ammonium Chloride:	0.9%
Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) Dimethyl Benzyl Ammonium Chloride:	2.0%
Octyl decyl Dimethyl Ammonium Chloride:	1.5%
Dioctyl Dimethyl Ammonium Chloride:	0.6%

Acidic cleaner & wide spectrum disinfectant

DESCRIPTION

ACI QUAT is a foaming disinfectant that could be used by circulation or manual application to disinfect non-porous hard environmental surfaces in a food processing plant.

APPLICATION

Remove gross filth and heavy soil deposits. Preclean all surfaces prior to sanitation.

To Sanitize: Thoroughly wet surfaces. Dilute 1 part **ACI QUAT** in 100 parts water (10mL **ACI QUAT** /1 Liter of water), This dilution provides 500 ppm of active quaternary ammonium. **ACI QUAT** can be applied with a mop, sponge, or cloth as well as coarse (trigger) spray. Prepare a fresh solution for each use then discard. Apply the solution for 10 minutes (contact time); then rinse with abundant potable water.

PROPERTIES

Appearance: Clear liquid

Odor: Pleasant

pH (0.4% solution): 2.00±1.00

Specific gravity @ 25°C: 1.150±0.050



PERCID

PERACETIC ACID - SANITIZER

DESCRIPTION

PERCID is an equilibrium mixture of peracetic acid, hydrogen peroxide, acetic acid and water. **PERCID** was formulated to sanitize surfaces in contact with food, reservoirs, C.I.P. evaporators, fillers, aseptic equipment and pasteurisers found in dairies, wineries, breweries, and food, beverage and meat processing and packaging plants.

DIRECTIONS FOR USE

Use **PERCID** on previously cleaned equipment. Allow a 0.3-0.4% (3 to 4 ml in 1 liter water) solution to circulate at 5-40°C (40-105°F) and keep in contact for at least 60 seconds. Drain. Do not rinse with water (active ingredients break down into water, oxygen and vinegar). Leftover sanitizing solution that is clear and in good condition can be stored and regenerated with fresh **PERCID**.

BENEFITS

Environmentally-friendly
Broad spectrum control of microorganisms.
Non-corrosive to stainless steel.
Non-foaming formulation.
Shelf life: 3 months (min.)
Can be used in the acid cleaning operation and calibrated by conductivity.

PROPERTIES

Appearance: Colorless clear liquid
Odour: Pungent
pH (1% sol.): 2.50±0.50
Specific gravity @ 25°C: 1.145±0.050
Solubility: Complete
Peracetic acid (% min. wt/wt): 5.0%

PRECAUTIONS

Do not mix with chlorinated products. Do not store in food processing or storage areas. Do not contaminate food products. Safe on stainless steel and aluminum. Not safe on soft metals such as brass, copper, zinc and mild steel.

STORAGE

Store at cool temperature. Storage place and piping should be away from heat sources such as steam lines, boilers etc. Do not store in insulated vessels. Decomposition rate of **PERCID** is roughly doubled by every 10°C increase.

INGREDIENTS

Contains: Peracetic acid and hydrogen peroxide.



ANTI-MICROBE

DIN # 02248351

Alcohol Free

Instant hand foaming sanitizer

Kills 99.99% of germs

DESCRIPTION

Antiseptic hand foaming sanitizer that kills, within seconds, 99.99% of most disease-causing germs related to SARS, colds and flu. Helps prevent infections in minor cuts and abrasions.

DIRECTIONS

Put a thumbnail size amount in your palm and rub hands together briskly until dry. No rinsing necessary.

WARNING

Keep out of reach of children. Product intended for external use only. Contact with eyes should be avoided and should this occur, the eyes should be flashed with water.

FABRIQUE AU / MADE IN CANADA

Questions ? 514-745-2597

e-mail : info@atomesbio.com



H4S 1V8



**Efficacy Data: Published by NO RINSE LABORATORIES (Ohio, USA)
The efficiency of No Rinse Foaming Hand sanitizer**

In-Vitro Antimicrobial Test Procedures and Protocols:

1. Each test organism was grown overnight on Trypticase-soy agar slants at 35°C. Cell suspensions were prepared by adding 10-ml sterile saline (0.9%) to each slant and gently scraping the slant surface. Microbial densities of each cell suspension were estimated using the viable plate count method.
2. Test product (1-ml) was aseptically added to sterile test tubes and then inoculated with a 1:10 dilution of a cell suspension (100uL) of the test organism. At selected time intervals (0.5, 1.0 and 2.0 minutes), aliquots (10uL) were aseptically removed and transferred to a Trypticase-soy broth recovery medium (10-ml). Microbial growth was monitored by the development of turbidity in the recovery medium

TEST Results:

The active Quaternary Ammonium Chloride exhibited strong germicidal activity against a variety of gram-positive and gram-negative, as well as the yeast *Candida albicans*. In most cases viable cell numbers were reduced by greater than 99.99% after a 30 second exposure period with this product.

Test Microorganisms	Initial Inoculum (cfu/10uL)	Exposure Time (Minutes)			Reduction (percent)*
		0.5	1.0 Grown in TSB	2.0	
<i>Pseudomonas aeruginosa</i>	3.39 x 10 ⁵	-	-	-	99.99
<i>Klebsiella pneumonia</i>	2.76 x 10 ⁵	-	-	-	99.99
<i>Escheria coli</i>	15.8 x 10 ⁵	-	-	-	99.99
<i>Salmonella typhimurium</i>	18.9 x 10 ⁵	-	-	-	99.99
<i>Staphylococcus aureus</i> ATCC33591	21.2 x 10 ⁵	-	-	-	99.99
<i>Staphylococcus Epidermidis</i>	18.3 x 10 ⁵	-	-	-	99.99
<i>Streptococcus faecalis</i> – ATCC522A	9.8 x 10 ⁵	-	-	-	99.99
<i>Streptococcus agalactae</i>	12.1 x 10 ⁵	-	-	-	99.99
<i>Micrococcus luteus</i>	14.4 x 10 ⁵	-	-	-	99.99
<i>Candida Albicans</i>	12.6 x 10 ⁵	-	-	-	99.99
<i>Trichophyton</i>	9.6 x 10 ⁵	-	-	-	99.99
<i>Mentogrophytes</i> (Athlete's Foot)	-	-	-	-	-
<i>Salmonella Chlorocraesuis</i>	14.1 x 10 ⁵	-	-	-	99.99
<i>Aspergillus Niger</i>	11.8 x 10 ⁵	-	-	-	99.99
Listeria Monocytogenes	17.9 x 10 ⁵	0 CFU/ML (30 seconds)			
Clostridium difficile	1.1 x 10 ⁵	0 CFU/ML (15 seconds)			
Human Coronavirus (Resembles SARS-like virus family)		0 CFU/ML (15 seconds)			



(*) Indicates percentage reduction in numbers of viable cells evidenced by lack of growth in Trypticase-soy broth medium. (-) Indicates no survival of test organisms in the recover medium.

This study is performed by NO RINSSE LABORATORIES, LLC. 900 E: Franklin Street, Centerville, Ohio 45459 USA



50 ml pump

- ⇒ **PROVEN TO KILL HUMAN CORONAVIRUS**
(resembles the SARS-like virus family)
- ⇒ **EFFECTIVE IN KILLING C. DIFFICILE BACTERIA**
- ⇒ **WILL NOT REMOVE FINGERNAIL POLISH**
- ⇒ **NON DRYING**
- ⇒ **NON-FLAMMABLE**
- ⇒ **INCREASED USE COMPLIANCE**
- ⇒ **Each application requires 65% less volume than alcohol gels**

**NO RINSE
ALCOHOL FREE
HAND
SANITIZER**
Patent Pending
ANTI-MICROBE
DIN#02248351

Approved by Health Canada and Agriculture Canada



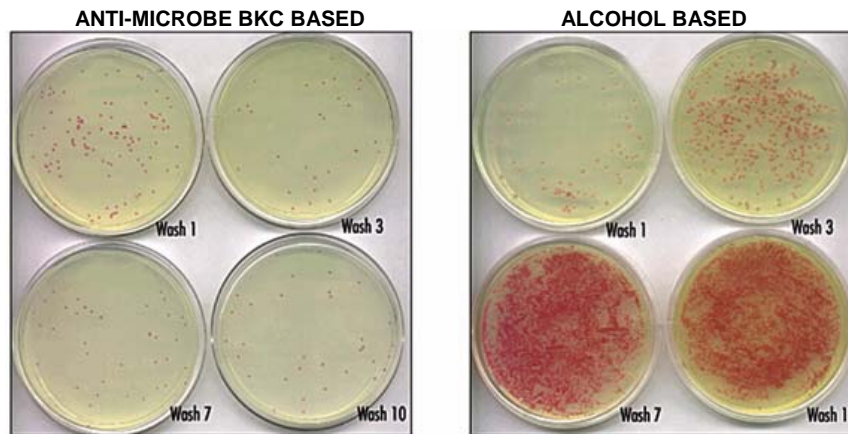
1.5 L wall-mounted pump

	ALCOHOL-BASED HAND SANITIZING GEL	ANTI-MICROBE NO-RINSE ALCOHOL-FREE ANTIBACTERIAL FOAMING HAND SANITIZER
%COMMON BACTERIA KILLED IN 30 SECONDS	99.99	99.99
DRYING TIME	Instantly when rubbed in	Soon after being rubbed in
FLAMMABILITY RATING	4	0
HAZARDOUS MATERIAL	Yes FLAMMABLE	No
POSSIBLE IRRITATION TO HANDS	<ul style="list-style-type: none"> ➤ Drying to skin from repeated use or use during cold whether ➤ May irritates cuts and abrasions ➤ Removes nail polish 	Excessive use may cause temporary dryness
AMMOUNT / APPLICATION	1.5 ml	0.4 ml
PRODUCT FORM	Gel	Foam
MAINTENANCE HAZARDS	➤ Alcohol may harm floor finish	None



COMPARATIVE ANALYSIS BETWEEN ALCOHOL BASED HAND SANITIZER & FOAMING HAND SANITIZER

Woodward Laboratories compared alcohol-based gels with HandClens (foaming hand sanitizer). HandClens has been the subject of four scientific investigations. Two addressed the products efficacy against the Federal Guidelines for antiseptic hand washes and healthcare personnel hand washes. The results of these studies are represented by the charts below. With repeated use of alcohol-based sanitizers germ-killing effectiveness (antimicrobial persistence of activity) is reduced by the drying effect of alcohol which leaves microscopic cracks in the skin that can allow bacteria to become trapped or hidden.



FDA testing protocol listed in Federal Register, Vol 59 (116), June 17, 1994, 21 CFR 333.470. "Effectiveness testing of an antiseptic Handwash or healthcarepersonnel Handwash."

HandClens is 99.99% effective against the most frequent disease and illness causing germs.

Woodward's HandClens Kill Time Study

The following are just some of the pathogens killed within 15 seconds of exposure to HandClens.

Candida albicans	Candida keyfr
Escherichia coli	Enterococcus faecalis
Enterococcus faecium (VRE)	Klebsiella pneumonia
Microcooccus luteus	Pseudomonas aeruginosa
Proteus mirabilis	Salmonella typhimurium
Serratia marcescens	Staphylococcus aureus
Staphylococcus aureus (MRSA)	Salmonella enteritidis
Staphylococcus epidermidis	Staphylococcus haemolyticus
Staphylococcus saprophyticus	Streptococcus pyogenes
Herpes simplex virus Type 1	Human Coronavirus (related to SARS)
Trichophyton mentagrophytes	Trichophyton rubrum
Apergillus niger	Hepatitis A and B

In vitro tests performed by SCI Laboratories, Inc.; revised protocol of CFR 333.470, Woodward Laboratories, Inc.; revised protocol of CFR 333.470, Viomed Laboratories, Inc.; revised protocol of ASTM E1052, and ATS Laboratories, Inc.; protocol of WLI01041603.COR



ANTI-MICROBE (DIN#02248351)

BIOLOGICAL PROPERTIES

Phenol Coefficients

Phenol Coefficients were determined by
the official A.O.A.C procedure

10- Minute Killing Dilution

Organism	Dilution of Anti-microbe in water to get the 10 minute killing	Concentration of Anti-microbe (ml/L) to kill in 10 minutes	Phenol	Phenol Coefficient
<i>Brucella abortus</i>	1/152.6	6.55 ml/L	1/110	1.387
<i>Escherichia coli</i>	1/101.25	9.87 ml/L	1/70	1.446
<i>Klebsiella pneumoniae</i>	1/93.75	10.66 ml/L	1/90	1.042
<i>Lactobacillus casei</i>	1/393.75	2.54 ml/L	1/100	3.937
<i>Listeria monocytogenes</i>	1/270	3.70 ml/L	1/100	2.700
<i>Mycobacterium amegmatis</i>	1/78.75	12.70 ml/L	1/65	1.211
<i>Neisseria caiarbalis</i>	1/64.89	15.41 ml/L	1/70	0.927
<i>Pasteurella multocida</i>	1/202.89	4.92 ml/L	1/110	1.844
<i>Proteus vulgaris</i>	1/45	22.22 ml/L	1/70	0.642
<i>Pseudomonas aeruginosa PRD-10</i>	1/52.25	19.14 ml/L	1/70	0.746
<i>Salmonella gallinarum</i>	1/105	9.52 ml/L	1/80	1.312
<i>Salmonella pullorum</i>	1/93.75	10.66 ml/L	1/90	1.042
<i>Salmonella typhimurium</i>	1/75	13.33 ml/L	1/70	1.071
<i>Salmonella schottumelleri</i>	1/225	4.44 ml/L	1/95	2.368
<i>Salmonella typhosa</i>	1/168.75	5.92 ml/L	1/90	1.875
<i>Shigella sonnei</i>	1/93.75	10.66 ml/L	1/80	1.172
<i>Staphylococcus aureus</i>	1/168.75	5.92 ml/L	1/60	2.812
<i>Streptococcus fecalis</i>	1/562.5	1.77 ml/L	1/70	8.028
<i>Streptococcus pyogenes C-203</i>	1/93.75	10.66 ml/L	1/80	1.172
<i>Streptococcus viridans</i>	1/262.5	3.80 ml/L	1/90	2.916
FUNGI				
<i>Saccharomyces cerevisiae</i>	1/187.5	5.33 ml/L	1/100	1.875
<i>Pityrosporium ovale</i>	1/131.25	7.61 ml/L	1/100	1.312



Microbicidal-Microbiostatic Activity

The antibacterial effectiveness has been measured by an empirical broth dilution procedure in which the highest dilutions capable of inhibiting growth to 48 hours (microbiostatic) and killing all organisms in 24 hours (microbicidal) are determined.

Organism	Microbicidal	Microbiostatic
<i>Brucella abortus</i>	1/3750	1/7500
<i>Penicillium luteum</i>	1/3	1/6
<i>Penicillium notatum</i>	1/12	1/12
<i>Aerobacter aerogenes</i>	1/120	1/240
<i>Bacillus aerus, var. mycoides</i>	-	1/7500
<i>Bacillus subtilis</i>	-	1/7500
<i>Brevibacterium ammonigenes</i>	-	1/7500
<i>Klebsiella pneumoniae</i>	1/120	1/240
<i>Lactobacillus casei</i>	1/750	1/750
<i>Proteus vulgaris</i>	1/60	1/60
<i>Pseudomonas aeruginosa PRD-10</i>	1/30	1/30
<i>Salmonella gallinarum</i>	1/225	1/225
<i>Salmonella pullorum</i>	1/120	1/120
<i>Salmonella typhimurium</i>	1/120	1/240
<i>Salmonella schottumelleri</i>	1/60	1/240
<i>Salmonella typhosa</i>	1/468.75	1/937.5
<i>Salmonella choleraesuis</i>	1/225	1/225
<i>Shigella sonnei</i>	1/120	1/120
<i>Staphylococcus aureus</i>	1/937.5	1/15000
<i>Trichophyton interdigitale</i>	1/150	1/300
<i>Streptococcus pyogenes C-203</i>	1/375	1/375
<i>Streptococcus viridans</i>	1/1500	1/3000
<i>Saccharomyces cerevisiae</i>	1/750	1/1500
<i>Pityrosporum ovale</i>	1/1500	1/3000

These data show that anti-microbe possesses a broad spectrum of effectiveness against a variety of both gram-positive and gram-negative organisms.



SANI FOAM

ALKALINE CHLORINATED FOAMING CLEANER AND SANITIZER

DESCRIPTION

SANI FOAM is a special cleaner and sanitizer for food processing establishments uses. **SANI FOAM** was engineered as a chlorinated alkaline cleaner. It is a foaming cleaner.

APPLICATION

GENERAL CLEANING: use at 1-5% (10 ml – 50 ml **SANI FOAM** in 1 liter ; 1.28 – 6.4oz / gal) solutions, let the solution in contact with surfaces for at least 10 minutes then rinse with water.

SANITATION: use at a concentration of 1.5%. this concentration will provide 300 available chlorine. let the solution in contact with surfaces for at least 10 minutes then rinse with water.

PROPERTIES

Appearance : Clear yellowish liquid

Odeur: Slight chlorine

pH (1% solution): 12.00 ± 0.50

Specific gravity @ 25°C : 1.220 ± 0.010

Solubility: Instant and complete



BIOXY S ^{NEW}

SOLID PERACETIC ACID – SANITIZER

Unique to  **atomes**

DESCRIPTION

BIOXY S is a powdered product that generates peracetic acid in water. **BIOXY S** was formulated to sanitize surfaces in contact with food, reservoirs, C.I.P. evaporators, fillers, aseptic equipment and pasteurisers found in dairies, wineries, breweries, and food, beverage and meat processing and packaging plants. Use **BIOXY S** to sanitize water reservoirs.

DIRECTIONS FOR USE

Use **BIOXY S** on previously cleaned equipment. Use at a concentration of 0.2% (2 g **BIOXY S** in 1 liter of water ; or 20 g **BIOXY S** in 10 liters of water; or 200 g **BIOXY S** in 100 liters of water). This concentration of 0.2% yields 200 ppm of active peracetic acid. Allow a 0.2% solution to circulate at 5-40°C (40-105°F) and keep in contact for at least 60 seconds. Drain. Do not rinse with water (active ingredients break down into water, oxygen and vinegar). **BIOXY S** can be used from a concentration ranging from 0.2% up to 2%. **BIOXY S** at 2% (20 g/L) concentration is considered as a chemical sterilant.

PROPERTIES

Appearance: White powder

Odour: Mild

Solubility: Complete



Comparison BIOXY S ^{NEW} vs Liquid Peracetic Acid

Description	BIOXY S - atomes	Liquid Peracetic acid
Activity	10% active (2 times more concentrated)	5% active
Concentration used	0.2% 2 g / L = 20g / 10 L	0.4% 4 ml / L
Physical status	Solid	Liquid
Transportation	Safe	Hazardous
Odor	No odor	Offensive – Strong acetic acid smell
pH	Reacts with water to generate peracetic acid at neutral pH levels	The pH is highly acidic
Corrosion / surfaces	No induced corrosion	Extremely corrosive to surfaces
Handling / employees	Safe to handle	Extremely dangerous to handle
Storage	Requires a limited place	Requires large and a secured space to prevent leaking
Chemical stability	Stable	Decomposes if exposed to heat or organic materials



APPLE

Odor Control

Deodorant containing anti-microbial agents

DESCRIPTION

APPLE has a concentrated apple scent. **APPLE** masks, sanitizes and eliminates malodors. In addition, **APPLE** cleans different types of surfaces. Apply **APPLE** in toilets, kitchens, garbage containers, smoking areas, etc. to remove malodors and leave a pleasant apple scent.

PROPERTIES

Appearance: Green liquid

Odour: Apple

pH: Neutral (6-8)

APPLICATION

Apply as is to give a pleasant odor and sanitize. For floor wash, add 4 to 5 ounces of **APPLE** per gallon of water to your usual floor cleaner.



OXY CHLOR 12

SANITIZER

SODIUM HYPOCHLORITE

DESCRIPTION

OXY CHLOR 12 is a solution of sodium hypochlorite. **OXY CHLOR 12** is a sanitizer that controls microorganisms such as bacteria, yeast and mold.

APPLICATION

Cleaning: Use **OXY CHLOR 12** at a concentration of 0.2 to 3% in water.

For food plant use, food contact surfaces should be rinsed with abundant potable water before re-use.

Sanitation in food plants: (meat, fish, poultry, dairy and other food plants): use at a concentration of 0.2% maximum (2ml per liter). Do not rinse if concentration is at 200 ppm available chlorine or below.

For fish processing plants: Use to treat influent processing water for microbial control. Product should be fed into incoming water source with appropriate metering equipment and monitoring controls so as not to exceed 3 ppm total chlorine.

PROPERTIES

Appearance: Yellowish liquid

pH (1% solution): alkaline

Available chlorine~ 12%



SHELL KLIN HF

FOAMING ALKALINE CHLORINATED CLEANER AND SANITIZER

DESCRIPTION

SHELL KLIN HF is a special cleaner and sanitizer for food processing establishments uses. **SHELL KLIN HF** was engineered as a chlorinated alkaline cleaner. It is a highly foaming cleaner.

APPLICATION

CLEANER/SANITIZER: Combine product with water in a 1 to 30-40 proportion (1 part **SHELL KLIN HF** with 30-40 parts water). Apply using most suitable method (spray, soak, sponge, sponge mop, etc.). Allow solution 5 to 10 minutes of contact time with soiled surfaces and rinse with potable water. For soaking, soak for 5 minutes, then rinse.

EGG WASHING (240 ppm): Combine product with water in a 1 to 125 proportion (1 part **SHELL KLIN HF** with 125 parts water). Apply using most suitable method. Rinse with potable water.

FOR FOOD PLANTS AND OTHER INDUSTRIAL USE ONLY



SHELL KLIN NF

HIGH TEMPERATURE LIQUID CHLORINATED DETERGENT

DESCRIPTION

SHELL KLIN NF is a special cleaner and sanitizer for food processing establishments uses. **SHELL KLIN NF** was engineered as a chlorinated alkaline cleaner. It is a non foaming cleaner.

APPLICATION

CLEANER/SANITIZER: Combine product with water in a 1 to 30-40 proportion (1 part **SHELL KLIN NF** with 30-40 parts water). Apply using most suitable method (spray, soak, sponge, sponge mop, etc.). Allow solution 5 to 10 minutes of contact time with soiled surfaces and rinse with potable water. For soaking, soak for 5 minutes, then rinse. Recommended for use with CIP systems.

EGG WASHING (240 ppm): Combine product with water in a 1 to 125 proportion (1 part **SHELL KLIN NF** with 125 parts water). Apply using most suitable method. Rinse with potable water.

EGG DESTAINING (250 ppm): Combine product with water in a 1 to 120 proportion (1 part **SHELL KLIN NF** with 120 parts water). Apply using most suitable method. Rinse with potable water.

FOR FOOD PLANTS AND OTHER INDUSTRIAL USE ONLY



SAFE ACID HF

FOAMING ORGANIC ACID BASED CLEANER

PHOSPHATE FREE

DESCRIPTION

SAFE ACID HF is a concentrated phosphate-free foaming acidic cleaner. This chemical will efficiently remove mineral deposits. It is extremely good for using via foamer to foam surfaces.

APPLICATION

SAFE ACID HF is used at a concentration of 1.0-10.0% (10 mL/L to 100 mL/L for removing inorganics.

PROPERTIES

Appearance: Clear liquid

pH (1% solution): 3.00 ± 1.00

Specific gravity @ 25°C: 1.110 ± 0.050

INGREDIENTS

Contains: citric acid, surfactants,
urea- monohydrochloride and urea-sulfate

MADE IN CANADA

FOR FOOD OR INDUSTRIAL ESTABLISHMENTS



SAFE ACID NF

A NON FOAMING ORGANIC ACID BASED CLEANER

PHOSPHATE FREE

DESCRIPTION

SAFE ACID NF is a concentrated phosphate-free acid cleaner. This chemical will efficiently remove mineral deposits. It is extremely good for cleaning in place.

APPLICATION

SAFE ACID NF is used at a concentration of 0.5-5.0% (5 mL/L to 50 mL/L for cleaning in place.

A concentration of 5.0% (50 mL/L ; 6.4 oz/gal) is recommended for manual cleaning.

PROPERTIES

Appearance: Clear liquid

pH (1% solution): 3.00 ± 1.00

Specific gravity @ 25°C: 1.120 ± 0.050

INGREDIENTS

Contains: citric acid, urea- monohydrochloride and urea-sulfate

MADE IN CANADA

FOR FOOD OR INDUSTRIAL ESTABLISHMENTS



DESCRIPTION:

SAFE ACID NF is a low pH organic salt that is used to replace traditional strong corrosive acids. Our acid replacement technology is safe, non hazardous and biodegradable.

ADVANTAGES:

- 4 to 10 times more effective than citric and glycolic acid and 2 to 3 times more effective than phosphoric acid when dissolving calcium carbonate.
- High performance vs cost ratio compared to phosphoric and citric acids.
- Non-fuming, safer to handle and store.
- No solubility limits (ideal for concentrated cleaners).
- Classified as a mild skin irritant.
- Phosphate free thus eliminating the potential of eutrophication (algae blooming).
- Low contributor to BOD/COD in effluents.
- Approved for use in green seal and Canadian ecologo products.
- Contains no VOCs and no bleaching agents.
- Non-corrosive to skin, mild steel and most of surfaces.
- Approved by the US EPA as a non-food inert ingredient in biocide applications.

APPLICATIONS:

Industrial and Institutional	Transportation
Tub & tile cleaners	Acid presoaks
Grout cleaners	Bay & wall cleaners
Bowl cleaners	Locomotive cleaners
Soap scum ring line remover	Concrete truck & equipment cleaners.
Descalers/Delimers	
Carpet pre-spotters	
Metal cleaners	
Concrete floor cleaners	

FOOD AND DAIRY CLEANERS

Phosphate free beerstone and milkstone removers excellent replacement for phosphoric and nitric acid.



APPLICATIONS: (continued)

MARINE

No need to disassemble equipment.

- Air compressors
- Air conditioning
- Air ejectors
- Boilers
- Booster heaters
- Bow thrusters
- Bumpers
- Buoys
- Chillers
- Condensers
- Control valves
- Cylinder jackets
- Desalination units
- Diesel engines
- Distilling plants
- Engine blocks
- Engine cooling systems
- Engine heads
- Engine manifolds
- Evaporators
- Feed water heaters
- Fenders
- Fire mains
- Generators
- Heat exchangers
- Hulls
- Intake screens
- Keel coolers
- Lube oil coolers
- Propellers

Also effective to control zebra mussels.

To clean a dirty grout, you can dilute 1:2 to 1:4. For a normal maintenance, this product has to be diluted 1:10.



Before Cleaning



After Cleaning



DE FOAM

DESCRIPTION:

DE FOAM is a highly stable, long-lasting, "reacted" silicone defoamer which virtually eliminates problems associated with improperly emulsified silicone oils found in most silicone defoamers. Readily dispersible, **DE FOAM** is effective under a broad range of conditions including high-temperature and pressure processes.

TYPICAL PROPERTIES:

Appearance :	Milky white liquid.
Chemical nature :	Reacted poly-siloxane dispersion.
Ionic charge :	Nonionic
Dispersibility :	Easily dispersed in water.
Stability :	Excellent to dilute acids and alkalis at dye bath concentrations.

ADVANTAGES:

- Eliminates foam efficiently throughout dyeing cycle - defoams even during depressurizing of jets.
- Superior compatibility with dyes and other chemicals stable to most electrolytes.
- Efficient and stable at high temperatures; resistant to emulsification by processing surfactants.
- Effective in all types of dyeing equipment; leaves no scum ring, avoids dye spots.

APPLICATION:

Selecting a defoamer involves far more than evaluating its efficiency to kill foam. The product must be finely balanced to control foam, yet have the stability necessary to prevent any negative effects caused by the active defoaming ingredients.

DE FOAM is a "stabilized" silicone defoamer manufactured by an exclusively developed HYDRO-SILICONE reaction process. By altering the defoaming molecule, we have greatly



increased its foam killing efficiency and made it far more resistant to emulsion breakdown. The water dispersibility of **DE FOAM** is also superior to that of other silicones, so it rinses freely from the goods.

Unlike other silicone defoamers **DE FOAM** is stable in baths containing high concentrations of electrolytes which can come from one or more of the following sources:

1. pH modifiers (ammonium sulphate, MSP, TSP, other salts).
2. Water (hardness ions and trace metals).
3. Dyestuffs (the dye molecule, salt, diluents, and/or dispersants).
4. Chemicals (cationic or anionic materials).
5. Salts (common salt, Glauber salt).

While most defoamers (silicone or non-silicone) show poor emulsion stability in electrolytes, **DE FOAM** exhibits no breakdown in as much as 50 g/l electrolyte solutions.

USE LEVELS:

Because **DE FOAM** is a stabilized, reacted silicone product, very low silicone levels are required for effective defoaming.

For most applications, the use of 0.25 - 0.5% O.W.G. (on weight of goods) **DE FOAM** provides effective foam control. Greater amounts are required only where surfactant levels in the bath are unusually high.

DILUTION PROCEDURE:

Pre-dilute **DE FOAM** with 10 - 20 times its weight of cold water (16° - 32°C / 60° - 90°F), using hand mixing or light, low speed mechanical agitation (as with any defoamer emulsion, the use of lengthy or high speed mechanical mixing during the dilution process should be avoided, as it can tend to over-shear and break down the emulsion). Add **DE FOAM** to the dyeing machine before the addition of any other chemicals. **DE FOAM** should not be mixed with acid or any other chemicals before adding to the dye bath.

DE FOAM is normally added at the beginning of the dye cycle. However, when properly diluted as above, it can be added to the bath during the dye cycle if needed.

COLD WEATHER HANDLING:

KEEP FROM FREEZING. If exposed to temperatures below 4°C (40°F), freezing damage may result. If this occurs, consult *ATOMS*. before using.



DE SCALE

HYDROCHLORIC ACID BASED DESCALER WITH CORROSION INHIBITOR

PRODUCT DESCRIPTION

DE SCALE is a highly active cleaning agent and descaler based on hydrochloric acid. **DE SCALE** also includes a special CORROSION inhibitor to protect carbon steel, copper and brass against acid attack. This inhibitor also serves as a penetrant and dispersant to enhance the effectiveness of the acid.

DE SCALE can be used to dissolve lime-scale (calcium carbonate) deposits in boilers, calorifiers and heat exchangers.

Application rate for **DE SCALE**:

DE SCALE can be used at strengths between 20 and 50% and at temperatures up to 80°C, the speed of reaction being enhanced by acid strength and elevated temperature. Contact **ATOMS** for the exact dosage recommended for a particular application. After completion of descaling equipment should be drained and flushed thoroughly and any acid effluent neutralised. For further technical assistance please contact **ATOMS**.



FORMUL-A-CID

ACID CLEANER FOR THE FOOD INDUSTRY

DESCRIPTION

FORMUL-A-CID is a highly concentrated blend of nitric and phosphoric acids. This product eliminates all traces of mineral deposits and will not foam.

APPLICATION

FORMUL-A-CID is used for in place cleaning with a concentration of 0.5-2.0% wt/wt. It is also efficient at low temperatures.

For food plant use, food contact surfaces should be rinsed with abundant potable water before re-use. Do not contaminate food products.

PROPERTIES

Appearance: Clear liquid

pH (1% solution): Acidic

PRECAUTIONS

Do not take internally. If ingested, give 3-4 glasses water or milk to drink and seek medical attention. **DO NOT INDUCE VOMITING.** If product comes in contact with eyes, flush for at least 15 minutes with a large amount of water. If irritation persists, consult a physician.

INGREDIENTS

Contains: Phosphoric acid, Nitric acid.

MADE IN CANADA



atomes

INORGANIC
(SCALE, LIME, RUST, etc.)

ORGANIC
(GREASE, OIL, PROTEINS, CARBONISED DEPOSITS)

pH



ACI-QUAT
DIN#02244321
Acidic cleaner & Disinfectant

O PURE
Water circuits cleaner

ACID MIX
Nitric + Phosphoric

CLR HF
Foaming acidic cleaner

CLR NF
Non foaming acidic cleaner

PERCID
Peracetic acid sanitizer

FORMUL-A-CID
Nitric + phosphoric

ATO PURE
Scale remover

SPEED
Caustic additive for
bottle washing

ENHANCE I
Detergent for breweries-
one Step

MULTI ACTION 5
DIN#02264021
Surface disinfectant – ready to use

ATO QUAT
DIN#02243658
Disinfectant : Quaternary ammonium 10%

ANTI-MICROBE
DIN#02248351
Foaming hand disinfectant- no rinse

PERLY MOUSSANT
Foam Hand soap

PERLY
Viscous hand soap

RINSY
Rinse aid- automatic dishwasher

PINY
Floor cleaner

BIOXY S
Powdered peracetic sanitizer

EVOLUTION
Neutral foaming degreaser

EVOLUTIONASE P
Enzymatic degreaser -Protease

EVOLUTIONASE L
Enzymatic degreaser -Lipase

BIO CULTURE
Bacteria : Odor control

BIO TRAPPES
Bacteria: Grease trap

ATO BIND
Chain lubricant

ORA
All-purpose foaming degreaser

CAUSTI FOAM
Foaming alkaline degreaser

CHLORAT HF
Foaming chlorinated alkaline degreaser

CHLORAT NF
Non Foaming chlorinated alkaline degreaser

FOR OVEN
Degreaser: ovens & grills

SOLID
Powdered non-foaming degreaser

DRAINKLIN
Grease traps, drains, etc.

SOL KLIN
Foaming degreaser and sanitizer

REACTION 2000
CIP non-foaming degreaser

CAUSTIC NF
Sodium hydroxide 50%

OXY CHLOR 12
Sodium hypochlorite 12%

ATO SOFT
Concentrated degreaser

ENHANCE II
Cleaning additive for :
« Brown beer stone »