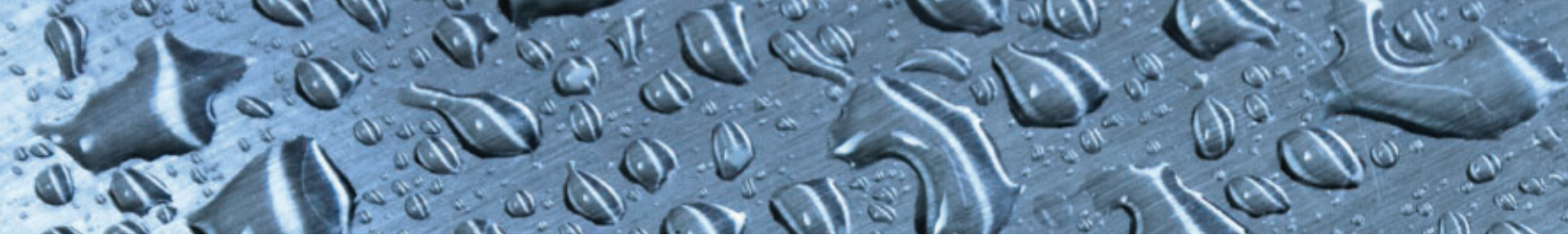


restaurants • hotels • healthcare • accommodations

# The Right SOLUTION





# The Right Solution for a cleaner environment

*The Right Solution makes a world of a difference in restaurants, cafeterias, food processing plants, supermarkets and any other establishment in the food processing industry, whether it be for proper hygiene of surfaces in contact with foods, dishwashing or washing the laundry.*

In a few words, The Right Solution is synonymous with:

- Tested and proven technologies;
- Efficiency;
- Productivity;
- Complete hygiene programs;
- Concentrated products;
- Proportioning systems;
- Cleaning accessories;
- Simple cleaning methods.

## The 5S hygiene program



Benefits of CHOISY's food processing industry hygiene program

Any establishment that integrates the 5S's in their management process can yield very positive results such as:

- Reducing the amounts of wasted food
- Stabilizing the quality of the products they offer
- Reducing instances of food poisoning
- Protecting the public's health
- Earning customer loyalty and expanding clientele.



# Cleaning with detergents resulting



**CHOISY's Amphoteric:** exclusive technology introduced, among others, into detergents specific to the food processing industry. For the last 25 years, Ali-Dher Fm-7, Ali-Dher and Aci-Dher have been essential elements within any food processing industry hygiene program. The amphoteric provide these highly efficient and economical products with properties specifically adapted to this industry.



**ALI-DHER FM-7 - 3422**  
**ALI-DHER - 3423**  
**(Slightly scented formula)**  
Highly effective detergents for the removal of grease accumulations, fats, oils and other soils commonly encountered in the food industry.

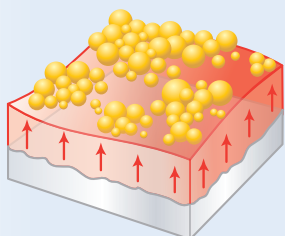


**ACI-DHER - 3420**  
Multi-acid descaling cleaner used on equipment found in cheese factories, fish shops, bakeries, butcher shops and in the meat processing industry. ACI-DHER can also restore copper pots & pans, descale coffee machines and neutralize griddle plates.

Products authorized for use in the Canadian food industry.

## Characteristics & benefits of applying AMPHOTERIC technology to detergents

### Remarkable emulsifying performance



Side view of a surface during the cleaning stage using ALI-DHER FM-7, ALI-DHER or ACI-DHER.

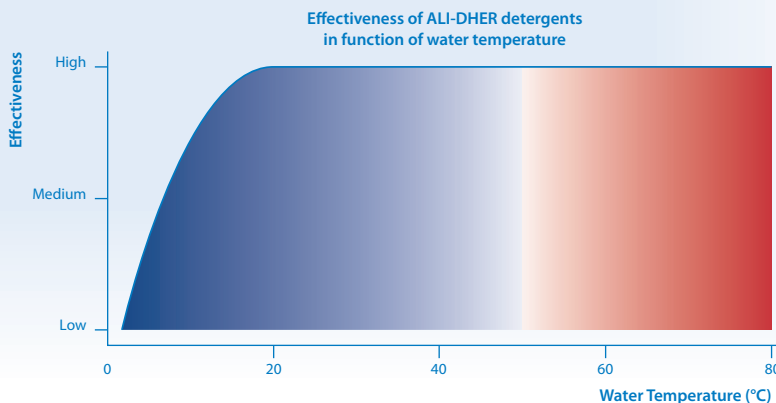
The detergents suspend grime and soils, easing the rinsing process. The emulsifying properties are equally very effective even on porous surfaces.

### Abundant, high adherence foam

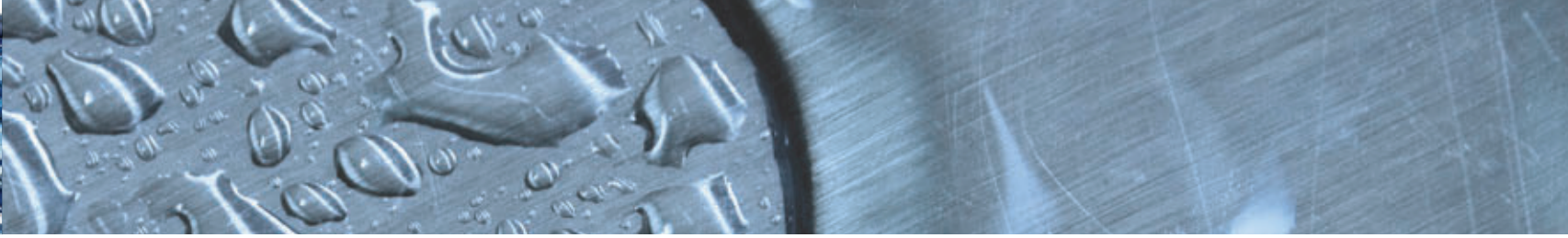


Amphoteric-based detergents produce abundant foam that is easily rinsed off. They foam clings exceptionally well to surfaces, enabling prolonged contact time and superior degreasing performance. These products are ideal for vertical surfaces.

### Effective in low temperature water



Working with low temperature water can considerably reduce energy costs associated with heating water.



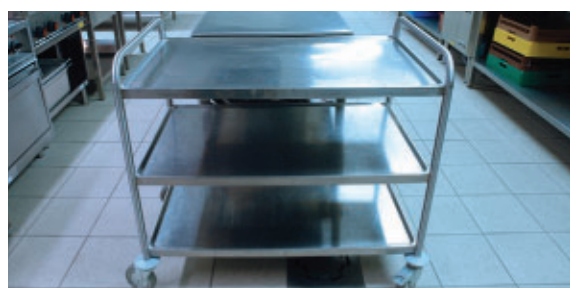
# from amphoteric technology

## Phosphate-free



## Effective on a wide variety of different surfaces

Thanks to their exceptional degreasing properties, ALI-DHER detergents can efficiently clean work tools, accessories, equipment, worktops, walls, floors, ceilings, or any other washable surface. These products are effective in hard and soft water, they contain a corrosion inhibitor making them barely corrosive for metal surfaces, and they have a low toxicity.



## Beneficial cost-control



ALI-DHER FM-7, ALI-DHER and ACI-DHER products are highly concentrated and extremely economical to use. The use of an automatic proportioning system is advantageous as it produces consistent dilutions and reduces wasting, therefore yielding better control over costs.

## Multiple methods of application



Cleaning solutions can be applied using an automatic proportioning & dispensing system, a manual sprayer, a cloth, a scrubber broom, or it can be used for soaking purposes.



# Disinfecting and sanitizing using

**Choisy amphoteric:** an exclusive technology also introduced in disinfection products. In order to sanitize surfaces, two alternative products are at your disposal, either AMFO (3050) a highly concentrated disinfectant and rinse-free sanitizer, or AMFO RTU (3051) a ready to use rinse-free sanitizer. AMFO and AMFO RTU products should be used in any establishment where superior sanitation standards are required, including areas where food is handled and/or processed.



**AMFO - 3050**  
Disinfectant and rinse-free sanitizer for the food industry.



**AMFO RTU - 3051**  
Ready to use amphoteric-based surface sanitizer for the food industry.  
This ready to use product is practical for areas that are not equipped with automatic proportioning systems. This product is guaranteed to meet the dosing requirements for rinse-free sanitizing (350 ppm active ingredients)

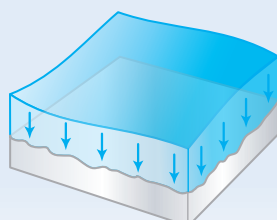
Products authorized for use in the Canadian food industry.

## Characteristics & benefits of applying AMPHOTERIC technology to disinfectants



- Leaves behind a bacteriostatic film after use, thereby reducing germ proliferation.
- Effective on organic substances such as proteins, fats and blood.
- Effective in cold and hot water.
- Effective in hard and soft water.
- Environmentally friendly:
  - Phosphate-free.
  - Low aquatic toxicity (when diluted).
  - Does not release volatile organic compounds (VOC's).
- User-safe:
  - Very low acute oral toxicity (when diluted).
  - Soft on the skin (when diluted).
  - No harmful or irritant fumes are released.
  - Non-flammable.

### Exceptional penetrating properties



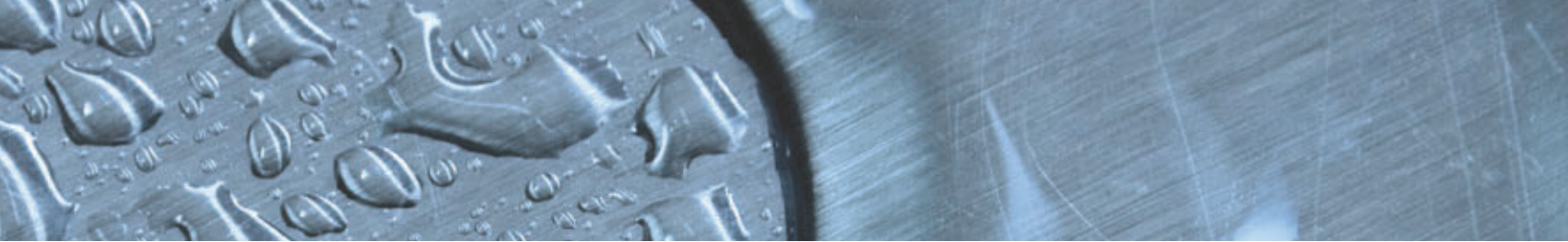
Side view of a surface during the disinfection stage using AMFO.



1. Amphoteric    2. Quaternary compounds    3. Peroxide    4. Bleach

### Wetting properties of different sanitizing/disinfecting compounds

As demonstrated on this image, the wetting properties of amphoteric allow the solution to spread vigorously over the surface. Consequently, AMFO clings exceptionally well to the surface, enabling a prolonged contact time, effectively penetrating porous materials in-depth to destroy lodged microorganisms. For the same quantity of solution, AMFO disinfects a larger surface area than any other type of disinfectant.



# amphoteric technology

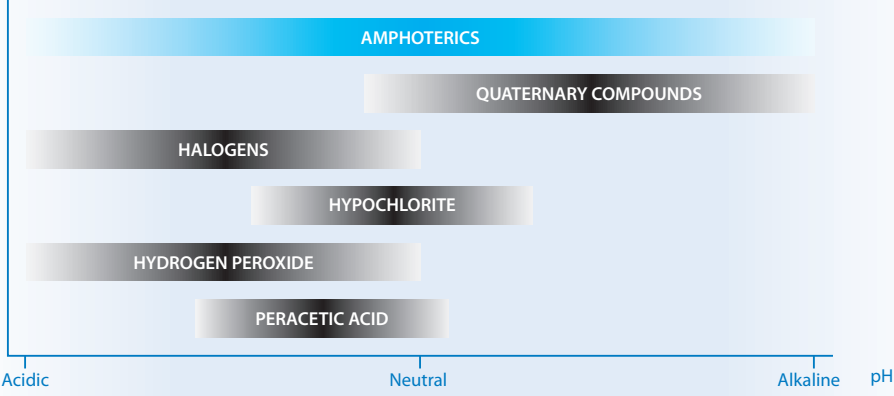
## Effective and safe to use on many different surface types

Safe to use on many different materials: metals, painted surfaces, wood, rubber, plastics, textiles.



## Effective in alkaline and acidic environments

Performance zone of amphoteric over the pH scale vs. other disinfecting compounds



## Beneficial cost-control



Being a highly concentrated disinfectant, it is beneficial to dose AMFO using an automatic proportioning system in order to maximize the output performance, and to obtain a consistent amount of required ppm.

## Effectiveness table

	Disinfection (10 min. 20 °C)	Rinse-free sanitizing, food industry standard (30 sec. 20 °C)
<i>Salmonella choleraesuis</i> (ATCC 10708)	✓	
<i>Salmonella typhi</i> (ATCC 6539)	✓	
<i>Staphylococcus aureus</i> (ATCC 6538)	✓	✓
<i>Pseudomonas aeruginosa</i>	✓	
<i>Escherichia coli</i> (ATCC 25922)		✓
<i>Listeria monocytogenes</i> (ATCC 19111)		✓
<i>Salmonella choleraesuis</i> (ATCC 13314)		✓
<i>Escherichia coli</i> O157:H7		✓

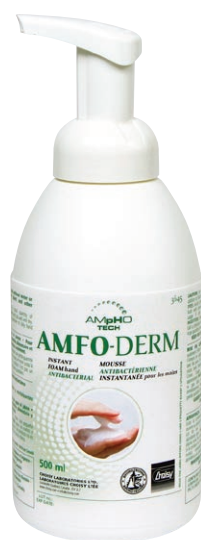
## PPM amount validation



A roll of test strips can be used to determine and validate the amount of ppm contained within the AMFO solution. Easy to use, all you need to do is compare the colour of the paper strip after immersing it with the colour-graded scale on the packaging to determine the concentration.



# Hand hygiene using an amphoteric-based product



## AMFO-DERM - 3645

AMFO-DERM is instant antibacterial hand foam.

### Characteristics & benefits

- Amphoteric-based balanced formula foam. Used without water. AMFO-DERM is not a substitution to proper hand hygiene (washing your hands).
- Soft on the hands.
- Effectively and rapidly reduces the amount of bacteria on the surface of the skin.
- Contains natural emollients that moisturize your skin.
- Does not dry out the hands.
- Leaves behind a non-greasy protective film.
- No added scent.
- Product authorized for use in the Canadian food industry.

## BENEFITS of amphoterics vs. other disinfecting products

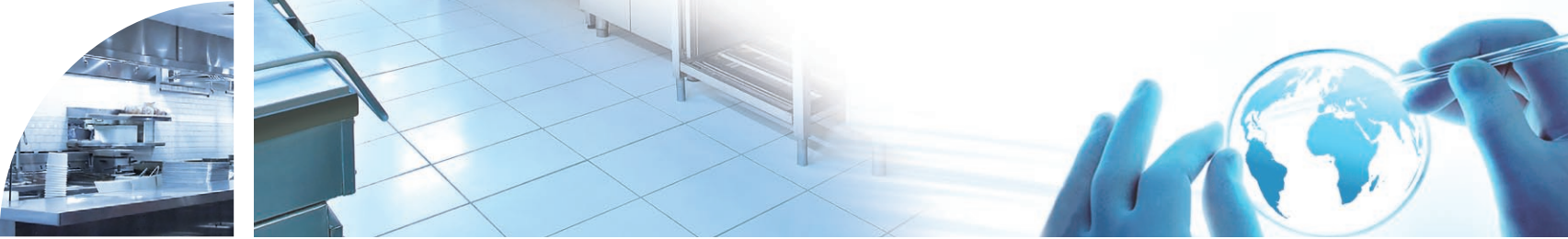
	ACTIVE INGREDIENT TYPES				Quaternary Amines
	Amphoterics	Chlorine	Peroxide	Alcohol	
Acute oral toxicity	Low toxicity	Corrosive	Corrosive	Toxic	Moderately toxic
Aquatic toxicity	Low toxicity	Toxic organochlorine product	Toxic	Low toxicity	Highly toxic
Effects on the skin	Mild	Corrosive	Corrosive	Low	Irritant
Corrosiveness	Barely corrosive	Very corrosive	Very corrosive	Non corrosive	Barely corrosive
Harmful or irritant fumes	No	Yes	Yes	Yes	No
Bacteriostatic film	Yes	No	No	No	Yes
Effectiveness on a broad range of the pH scale	Yes	No	No	Yes	More or less
Detergent properties	Yes	No	No	No	Yes
Flammability	No	No	Oxidizing agent	Flammable	No
Effectiveness on organic substances	Moderately	No	No	Yes	Moderately
Stability when in solution	Stable	Unstable	Unstable	Ineffective when diluted	Stable

## AMFO APPROVALS

AMFO has a drug identification number (DIN: 00615803) assigned by Health Canada.

AMFO is approved as a rinse-free sanitizer between 200 and 500 ppm and as a disinfectant.

AMFO is a product authorized for use by the Canadian food industry and is recognized by every Canadian province.



# Cleaning surfaces in the food processing industry by using biotechnological products

*Biotechnology effectively targets, mobilizes and harnesses natural processes in order to safely, and efficiently, break down soils and odours that plague our everyday surroundings and workplace environments. The microbiology and enzymology research & development program confirms Choisy's professionalism and expertise in the field of environmental biotechnology.*



## Common characteristics:

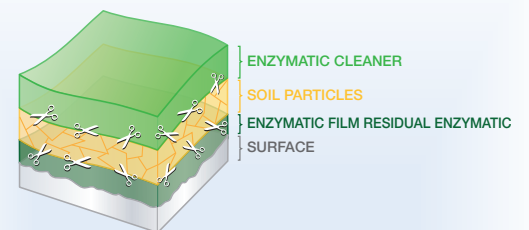


Illustration demonstrating the cleaning process when using an enzymatic detergent.

Enzyme-based detergents leave an enzymatic film over surfaces. Beneath the soil particles is the enzymatic protective film that remains from a past cleaning, while the layer above represents the cleaning task underway. The soil particles are immediately taken care of by the residual enzymatic film while considerably facilitating the cleaning task underway.

- Exceptional penetrating properties producing in-depth cleaning performance. Surfaces given an in-depth cleaning pave the way to superior disinfection results.
- The wetting properties of biotechnological products are exceptional. This property spreads the bioactive ingredients over a greater area, yielding greater efficiency.
- The high adherence foaming formula allows for an in-depth cleaning of vertical surfaces and hard to reach areas.
- Easy to rinse.
- Neutral pH – non corrosive.
- Do not release VOC's. Completely harmless to the ozone layer.
- Non toxic.
- Do not contain any solvents, caustic agents and artificial scents.
- Phosphate-free.
- Safe to the users and surface materials, environmentally friendly.
- Work in hand in hand with the other products in the product line.

## To clean any surface in the food processing industry: **AMBIO-DHER - 4504**

AMBIO-DHER is an enzymatic degreasing detergent effective on animal fats and vegetable oils and other types of soils commonly encountered in the food processing industry. AMBIO-DHER can clean range hood filters, range hoods, work tools, accessories, equipment, worktops, walls, or any other washable surface.

## To clean floor surfaces: **AMBIO-SOL - 4505**

AMBIO-SOL is an enzymatic degreasing cleaner used on floors and tilework grouting the food industry. It facilitates the task of cleaning, and maintaining clean grout joints on floors.

## For areas where food handling/processing creates foul odours, that require more than a simple cleaning: **BIODOZYME - 4506**

BIODOZYME is a concentrated enzymatic detergent that inhibits odours in the food processing industry. On top of performing in-depth cleaning of soils, BIODOZYME eliminates persisting odours caused by the residues generated in the food processing industry. Effective on mixed soils (fats & proteins).

## The “biotechnological essentials” for specific applications encountered within the food processing industry



**BIO-FILM - 4510**  
Bio-treatment for grease traps



**BIO-DOR - 4520**  
Bio-treatment for odour-control in waste compactors

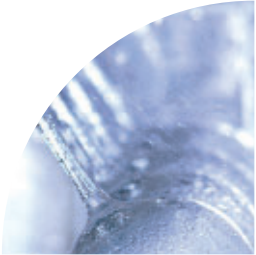


**AMBIO-JUMP - 4551**  
Bio-reduction agent used on greasy substances in drains & drainage pipes



**BIO-JET - 4502**  
Bio-treatment for self-cleaning range hoods





## Choisy's innovative green technologies have transformed the laundry and dishwashing process



### Technological and ecological progress

Choisy's laundry and dishwashing line of products are one of a kind across the world; the characteristics of these products surpass the ecological certification standards.

### Aquaforce™, state-of-the-art technology

- New technologies for the dispersion and anti-redeposition of stains and soils
- The use of eco-friendly raw materials
- Highly concentrated products
- Phosphate-free
- Contributes to the collective effort to protect our waterways, by eliminating phosphate-based chemical solutions and harmful solvents, and improving wastewater treatment.

### Water... vital

As water is vital for living, it is also essential for daily professional hygiene tasks. Water is a well-known natural solvent; it can now achieve unprecedented cleaning performance thanks to Choisy's Aquaforce™ technology. Aquaforce™, "The force of water serving hygiene with Choisy's green technologies".

## Dispersion & anti-redeposition of grime and soils

AQUAFORCE™ technology vs. Traditional chemistry



A | B

Photo 1

WASHING fabrics in a washing solution soiled with rust



A | B

Photo 2

State of the fabrics prior to rinsing



A | B

Photo 3

RINSING

After being rinsed, Aquaforce™ technology (photo 3A) expels soil particles that were seemingly clinging to the fabric (photo 2A) back into the water. The results shown in photo 3A are conclusive: the fabric is clean and the water contains the soiled particles. As for picture 3B (traditional chemistry), the results are mediocre: the soiled particles have remained on the fabric and the water contains very little.

To conclude, products developed thanks to Aquaforce™ technology are exceptional hygiene solutions that disperse soils and prevent them from resettling onto clothing or dishes.

A: The Aquaforce™ washing solution

B: Traditional chemistry solution



## Automatic dishwasher and laundry washing machine products



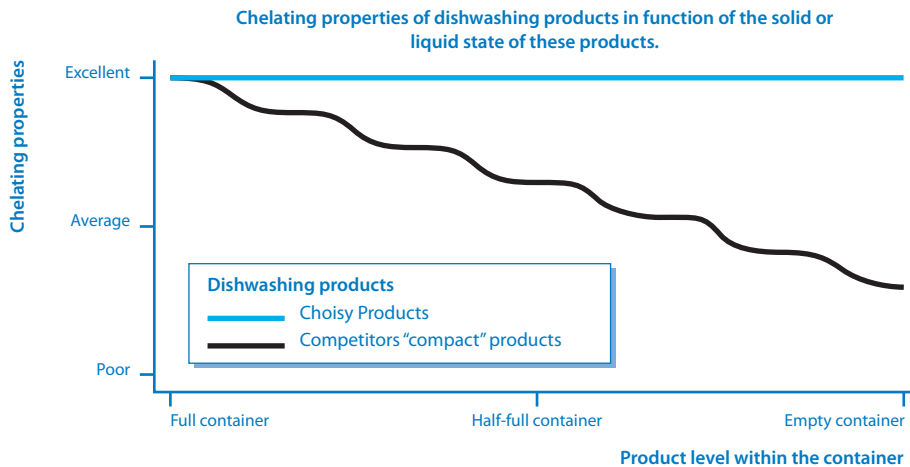
### General characteristics, benefits of automatic dishwasher and laundry washing machine products

CHARACTERISTICS	BENEFITS
Technology developed and tested by Choisy Laboratories Ltd.	This technology provides unsurpassed washing performance.
Highly concentrated products.	Usage concentration is very low resulting in minimal costs per use. Highly concentrated formulas considerably reduce the amount of input resources required and the amount of waste generated by containers / packaging.
Products are dosed automatically.	The use of an automatic proportioning system is advantageous as it produces consistent dilutions and reduces wasting, thereby yielding better control over costs.
Highly effective anti-redeposition properties.	This technology prevents grime and soils from resettling onto clothing and dishes. It also prevents limescale accumulations within washing machines and dishwashers. Costs are reduced by eliminating the servicing (descaling) of the interior of washing machines and by prolonging the lifecycle of mechanical components within the machines.
Phosphate-free.	Phosphates are responsible for excessive aquatic plant growth, algae and cyanobacteria in our lakes. Using phosphate-free products contributes to reducing lake eutrophication. <b>Third party test results obtained confirm and demonstrate that these products are phosphate-free. Furthermore, they exceed the requirements established by the Concentration of Phosphorus.</b>
EDTA and NTA-free. Technology composed of eco-friendly chelating & dispersing agents that support and favour the action of water without disturbing the fragile balance of ecosystems when reintroduced into the local aquifer.	EDTA and NTA are bioaccumulable chelating agents responsible for concentrating heavy metals into the environment. Using a product without bioaccumulable content is a necessary criterion to prevent the contamination of the food chain. Furthermore, NTA is classified as a potential carcinogen. The anti-scaling agents used in these products are readily biodegradable in accordance with OECD testing, series 301 (A to F) and are harmless to the end users.
Alkylphenol-free.	Alkylphenol-based compounds accumulated in sediments are harmful for marine life. Using alkylphenol-free products limits the risks of harming the balance and well-being of ecosystems.
Ozone-friendly.	Both of these product lines are completely harmless to the ozone layer. Most of these products do not contain & release VOC's.
CMR-free.	All of these products do not contain any known carcinogenic, mutagenic or reprotoxic substances.
Readily biodegradable organic substances.	The organic compounds found in these products are readily biodegradable in accordance with OECD testing, series 301 (A to F). Using readily biodegradable organic substances prevents the accumulation of harmful substances in the environment.
Respectful of natural habitats.	The composition of these products has a reduced toxicity impact on invertebrates, green algae and bacteria in accordance with Environment Canada's biological testing methods SPE 1/RM.



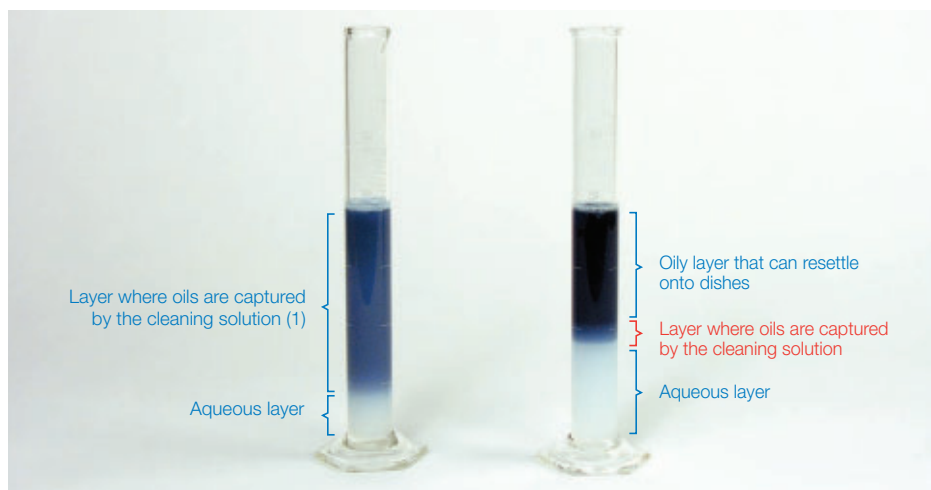
## Conclusive results obtained from comparative analysis

Comparative analysis studies performed with other products on the market have demonstrated that CHOISY automatic dishwashing products, even when used in hard water, yield remarkable effectiveness results. CHOISY products rarely require the installation of a water softener, this eliminates not only a considerable investment, but also eliminates any concerns related to upkeeping this type of system.



Choisy products ensure a stable supply of ingredients consistently throughout the use of the container. On the other hand, for certain competitors' products, the formula varies as the product is being dissolved, producing inconsistent results and performance from one wash cycle to the other.

## Emulsifying effects of Choisy's AQUAFORCE™ detergents vs. The competition



This test demonstrates the incredible emulsifying and oil-retention capacities of the Aquaforce™ solution (1) whereas the results obtained with the competition's product reveals a very minimal zone where oils are captured by the dishwashing solution. To conclude, using Aquaforce™ products ensures superior cleaning performance on oily/greasy substances, produces exceptionally clean results and it allows more wash cycles to be performed.

**The Aquaforce™ washing solution**

**The competition's washing solution**

Test demonstrating the emulsifying effects of a dishwashing solution soiled with oil.

## Laundry detergent products stand apart by:

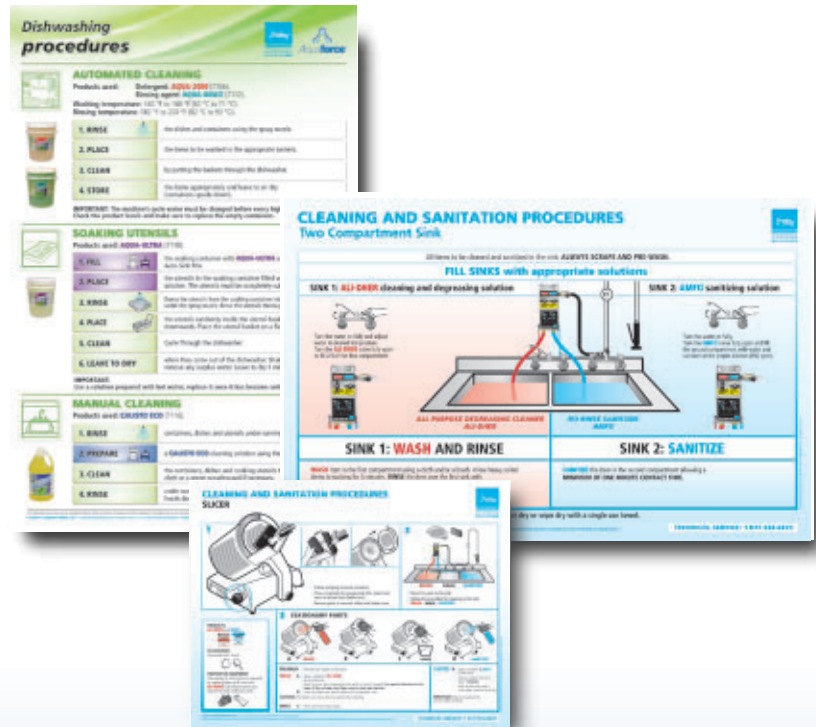
- Revitalizing the colours of fabrics & textiles;
  - The outstanding softness resulting from using this line of products;
  - Neutralizing and fabric-softening agents are both combined in one single product;
  - The short cycle times required while maintaining optimum washing results;
  - Mild pH formulas that reduce the wear and tear of fabrics and washing machines.
- All this, on top of the other characteristics described in the previous page.



# Food processing industry hygiene programs

## Services offered

- Products;
- Equipment & parts;
- Accessories.
- Staff training seminars;
- Management awareness seminars;
- Equipment maintenance;
- Implementation assistance;
- Technical support;
- Inspections.
- Sanitation guides;
- Evaluations;
- Consulting services;
- Training manuals.



## CHOISY's Expertise

- Professional and competent employees that can establish and implement customized food processing industry hygiene programs that address our clientele's specific needs.
- Our personnel is highly qualified to train employees on a current hygiene program, or when implementing a completely new hygiene program.
- Our team of experienced and qualified technicians are available to install, service, and troubleshoot automatic proportioning systems.
- Our technical and scientific personnel can address and resolve a client's particular issues.



# At the very heart of the development, production, and marketing processes: CHOISY's ENVIRO-TECHNIK.



## CHOISY's ENVIRO-TECHNIK

### Premium products recognized for their superior quality.

Since its inception in 1946, Choisy Laboratories Ltd. has followed the motto “chemistry and biotechnology serving sanitation, for a cleaner environment”.

Enviro-Technik is a serious, professional and responsible approach that Choisy follows in the development process, production, and marketing of their products.

ENVIRO-TECHNIK is:

- Ensuring the maximum utilization of scientific technologies to formulate and manufacture products safer to the environment, and to their users.
- Guaranteeing that every scientific and technical resource available has been put forth to meet the industry's requirements in terms of efficiency, quality, and environmental concerns.



# At the very heart of the development, production, and marketing processes: **CHOISY's ENVIRO-TECHNIK.**



## **CHOISY's ENVIRO-TECHNIK** Premium products recognized for their superior quality.

Since its inception in 1946, Choisy Laboratories Ltd. has followed the motto "chemistry and biotechnology serving sanitation, for a cleaner environment".

Enviro-Technik is a serious, professional and responsible approach that Choisy follows in the development process, production, and marketing of their products.

ENVIRO-TECHNIK is:

- Ensuring the maximum utilization of scientific technologies to formulate and manufacture products safer to the environment, and to their users.
- Guaranteeing that every scientific and technical resource available has been put forth to meet the industry's requirements in terms of efficiency, quality, and environmental concerns.



**CHOISY LABORATORIES LTD.**  
Louiseville (Québec) Canada J5V 2L7  
1 800 567-2157  
www.choisy.com • info@choisy.com

**Chemistry and biotechnology serving sanitation for a cleaner environment**