

Frexus[®]

Innovation in Sanitary Control



frexus[™]

Sanitation for the Food, Beverage
and Farming Industry

Frexus[®] – for the control of bacteria and fungi
in agricultural and industrial premises,
post-harvest fruit and vegetable washing,
beverage and processing facilities.

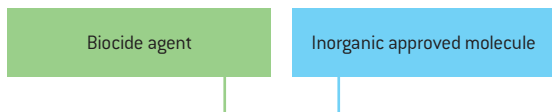
Frexus®

All the care taken in growing high quality fruit and vegetables, could be affected the moment fruit and vegetables are harvested from the field.

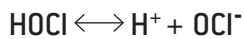
One of the main reasons for the deterioration in the quality of fruit and vegetables is the fermentation caused by undesirable fungi. This deterioration can start in the field, and continue to the moment of use by the consumer.

- Frexus® is an innovative product, with a simple application, that helps preserve the quality of the fruit and vegetables. It acts to eliminate the fungi that cause undesirable fermentation. Its effectiveness in food preservation is supported by empirical scientific evidence.
- Product is based on high purity Calcium Hypochlorite
- High degree of available active ingredients: 65–68%
- A solid product that preserves the active ingredients for longer periods – extended shelf life.
- Manufactured in R.S.A using modern, high quality processes.

Lonza offers a range of dosing systems especially manufactured and developed to guarantee the stability of the sanitized solution. As a world leader in the production of biocides, Lonza controls all the application technology involved in its products. In the chlorination process, we know the active disinfectant is not free chlorine, but a hypochlorous acid which is formed when diluting the Frexus® in water. However, the hypochlorous acid (HOCl) suffers ionic dissociation in a reversible reaction:



Frexus® + water = Hypochlorous acid + Calcium hydroxide

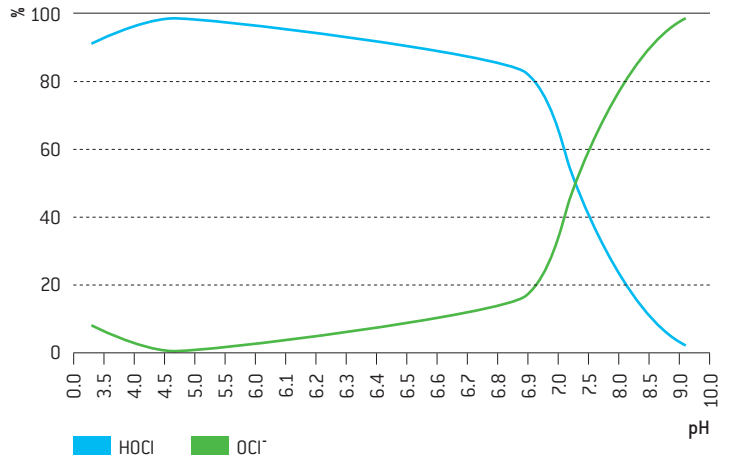


The hypochlorous acid (HOCl) is far more efficient as a biocide than the hypochlorite ion (ClO⁻). In a determined pH range, we will have a predominance of hypochlorous acid molecules. This is done through strict control of the pH level between 6.5–7.5. In this way we can guarantee the largest possible presence of the hypochlorous acid molecules which delivers the highest rate of microbial kill and minimizes the release of irritating and potentially hazardous chlorine gas.

Frexus® Program

The Frexus® product range has the answer to controlling the proliferation of undesirable micro-organisms during the processing of the foodstuffs. It is a range of sanitizing products geared specifically to the direct disinfection of surfaces and utensils which come into contact with foodstuffs during processing.

Concentration of Hypochlorous Acid in Solution



With dosers and controllers specially developed and sized for each scenario. Our disinfection program will preserve the quality of the final product.



Equipment Offered

Lonza offers a range of chlorine feeders and dosing systems to obtain maximum efficiency in the disinfection of foodstuffs without having to use large manual dosages of the active disinfectant.

Frexus® product available in two different types

- Frexus® Chips
- Frexus® Granules

Application

The product is a bactericide, used for the disinfection and cleaning of equipment, utensils, coops, livestock, farming facilities, aviaries, poultry spin chillers and in the water used for washing fruit and vegetables.

Please refer to the following table for preparation of solutions of various strengths of available chlorine:

Volume of water to be treated (l)				Weight of Frexus® Dry Chlorine Required (grams)
Treatment ppm (mg/l) Av. Cl ₂	100 l	500 l	1000 l	
1	0.15	1.00	1.50	
50	8.00	37.00	76.00	
75	12.00	58.00	115.00	
100	15.00	75.00	155.00	
150	23.00	115.00	230.00	
200	31.00	155.00	310.00	

Note: Always confirm chlorine level in the water, by using a reputable test method, before applying fruit / vegetables.



Washing of Fruit and Vegetables

In the post-harvest treatment of fruit and vegetables Frexus® has shown itself to be efficient in microbiological control. Studies have shown that the application of Frexus® can increase the lifespan of fruit and vegetables, increasing their shelf life, thereby reducing replacement cost and improving the product quality and company image.

By using the correct dosing units, the recommended active ingredient concentration can be effectively controlled for each application. Frexus® complies with SABS 1853 for use as a food contact product.

Different Uses for Frexus®

- Post-harvest washing of fruit and vegetables.
- Disinfection of potable, effluent and irrigation water.
- Livestock and agriculture applications
- Sanitizing of animal carcasses.
- Disinfection and cleaning of equipment and utensils in the food and farming industry.
- Beverage industry.



Recommendations



- Use gloves when applying.
- Do not swallow.
- Add the product to water to dissolve
(Note: do not reverse this procedure due to safety reasons).
- Avoid contact with the eyes, skin and mucous membranes.
- Avoid inhaling the concentrated product.
- Avoid mixing this product with other products.
- Keep the product in its original packaging.
- Keep the packaging firmly closed, in the shade in a dry and well ventilated area and away from foodstuffs and other chemical products.
- Store at a low ambient temperature less than 25°C.
- Dry the packaging before discarding.
- Do not re-use the empty packaging.

Note:

Please refer to Safety Data Sheet supplied by the manufacturer for detailed information.

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KEEP OUT OF REACH OF CHILDREN AND DOMESTIC ANIMALS.
NEVER MIX Frexus® with other chemical products.
ENVIRONMENT: Do not disperse the product in its original form into the air.
Use only when diluted in water.
ACTIVE CONSTITUENT: 680 g/kg available CHLORINE (Cl) present as
CALCIUM HYPOCHLORITE when packed
IN CASE OF AN EMERGENCY CONTACT THE POISONS INFORMATION CENTRE –
0861 555-777 (24 hours) or +27 (0)11 976-2115 (Office hours).
Please contact a Lonza food and beverage representative for more information –
+27 (0)11 393-9000

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