

ND Pharma & Biotech

LactoLife™

GIVING MORE LIFE^{TO}MILK

MILK AND DAIRY PRODUCTS MADE BETTER
with **LACTOLIFE™**

**100% NATURAL MINERAL FORMULA FOR
MILK & MILK-DERIVED FOODS PROTECTION**

KEY CONSIDERATIONS WHEN FORMULATING WITH LACTOLIFE™

Milk and milk-derived products are fundamental part of the world population diet. As a part of a healthy lifestyle and modern people evolved diet concepts, milk and dairy product should be included within those aliments that are considered not only as first-line nutritionals but further more, as essentials for life. In the recent times most of those formulated products, especially desserts are considered unhealthy for a number of reasons, fat, sugar, certain ingredients and additives within those delicious foods were situating that kind of products far aside the “healthy” concept.

Now, to formulate with ingredients, products and technologies as LACTOLIFE can make the difference in terms of meeting consumer’s demands for a healthy product within many aspects. From digestive health, (metabolism control, inertization of certain bacteria, break of sugars, pH natural stabilization, mineral source (chlorine –free), disbacteriosis prevention, reduction of acidity impact within the digestive system and others to the protection of formulas against certain bio-deteriorative activity, spoilage, etc. LACTOLIFE is without any doubt GIVING MORE LIFE TO MILK.

Once LACTOLIFE enters in contact with aqueous fraction of milk, it creates a reductive reaction that transforms H₂O clusters from long chain to short one, restructuring such water clusters and breaking some other solutes into smaller parts creating micro-milk molecules. This micro-fragmentative and restructurative reaction do not transform milk as itself. The reaction just create a more “light” milk but not reducing fat or protein or any other content, just making it softer and lighter in a natural way. So the result is a more stable milk, more digestible, easy to transform into other products and with more versatility and capacity to be processed and mixed with any other compounds, nutrients, flavors, aromas, etc., etc.

After years of research in milk and dairy technology, including modern trends on milk digestion issues and health impact of milk consumption within adult human body, we found that most of the issues emerged and concerns from medical, nutritional and life-science perspective are related to the complex in-vivo mechanisms that human physiology must deploy to absorb milk and the alterations created within the intestinal flora and the digestion vs. fermentation balance.

LactoLife™

It also allows the reconstitution of by-products of the dairy industry, FLUIDS IN GENERAL AND WATER RINSE (pre-filtered), acting in certain applications as a natural anti-microbial agent helping to the extension of shelf-life of foods and beverages, especially those made of milk and/or milk base. Use as Technology LactoLife™ has a multiple functionality.

IMPROVING SAFETY IN FOOD AND BEVERAGES NATURALLY WITH A REVOLUTIONARY SCIENTIFIC PROGRESS IN THE INDUSTRY.

LactoLife™ is the reference product and choice available in the market for industrial use which provides a healthy natural antimicrobial system. In certain applications, using LACTOLIFE has also capacity to prevent biofilm creation from certain bacteria without the need of detergents and *Chem-Tox* products in contact with milk and dairy ingredients, elaborates and compounds.

As manufacturers we created a synergistic formula of first-class/high quality natural mineral ingredients which, once added to the raw material, provides a mechanism of action that allows the conversion of liquids and fluids, including inhibiting the growth of bacteria, fungi and molds.

The product offers the opportunity to be a "clean label", as well as not providing any kind of smell, taste or color to food, in fact, it is a simple modification of the water (aqueous) fraction of milk and/or water present within the beverage to the point that such water fraction acquires a higher capacity to be mixed, emulsified, flavored, etc. being treated naturally, simply incorporating the necessary concentration of mineral substances (ions), so that the treated product amend its ionic charge, until their characteristics are inconsistent with microbial life, with no negative impact (actual or potential) to the human or animal body, while providing a whole world of advantages from mouthfeel to intestinal behavior or digestion-related factors.

When milk is processed, especially with high-pressure/high temperature procedures and techniques, there are some changes in the distribution of minerals affecting also to the solubility of such, particularly calcium, sodium, potassium and other salts. High pressure and homogenization processes are liberating a number of different levels of micellar elements into the soluble phases creating pH changes and sometimes changes into ionic concentrations. **LactoLife™** contributes to reduce the effect of milk and dairy processes, (including heating and pressure) in terms of mineral balance and micellar structure preservation.

LACTOLIFE™ is a *New Generation* of food-products and technology innovations related with food-safety and nutrition improvement.

LactoLife™ is engineered and designed to harness the full potential that nature provides starting from basic elements as minerals present in many of the foods we eat. Our product provides optimal safety and wholesomeness to foods and drinks, while opening the door to a new world of opportunities for the development of consumer products significantly reducing costs for processors and producers, filling some of the existing gaps in food-safety, duration, quality and easiness for processing.

LactoLife™ components are configured through the blending and mixing into a concentrated solution of complex of minerals (EU Regulation EC 1925/2006) and (USA-FDA approved GRAS ingredients), applicable and usable in all kinds of food and drinks without creating any changes in flavor, color and odor to concentrations of up to a 5% inclusive. More effective than chlorine or per-acetic acid and lactic acid reaches to eliminate 99.999% (5-log) 1 bacteria such as Salmonella, E. coli, Listeria and other coliform bacteria and Pseudomonas. When using it as natural-mineral cleaning agent.

It has proven efficacy in reducing and/or to inertization of pesticide residues and other harmful and / or toxic to the surfaces of certain products substances, especially suitable for the dairy industry. The reference product and choice available in the market for industrial use which provides a healthy natural antimicrobial system.

LactoLife™ is easy and simple to use and does not require special handling facilities and waste disposal systems or other similar devices. It is available as a concentrate for direct incorporation in different dilutions of the original suspension liquid.

By providing a natural control system by a combined microbiological activity, antimicrobial and antioxidant action, effectively increasing food security not only of products but also life, in terms of freshness and / or tenderness without special conservation requirements or complex installations, devices, machinery or utensils.

LACTOLIFE™ is not a bactericide or biocide, it's a concentrate of mineral salts and substances, made of high-quality food grade ingredients and therefore its registration as such biocides is not appropriate.

It is a composition of minerals in suspension with restructuring capacity of water and liquid which is added, causing reaction and creating a stable ionic charge mineral which acts indirectly as disruptor of cell wall and thus preventing microbiological life naturally.

Composition: water and minerals (Annex II of EC Regulation 1925/2006). Allowed to be added to drinking water and even suitable for the manufacture of beverages intended for such consumption according to relevant legislation of different EU member states and FDA (in the US).

LACTOLIFE™ WATER AND MINERAL SALTS

Mineral salts contained in the composition are essential macronutrients whose primary function is the nutrient mineralization of certain tissues and cellular elements of the human organism.

The technological function of these minerals in combination, along with elements of fortification to which are added, is being studied by our company and scientists working for us during more than 17 years. Research on the properties of certain types of water, antioxidants, bactericides and others that appear after a particular type of mineral hydrogeological transformation that we recreate by reaction system not only compensate possible deficiencies of certain foods, but discover endless possibilities for natural mineral-technological application of these procedures and methods 100% in unexplored areas of the food industry.

The wonderful thing about our discovery, protected by trade secret system represents an important new part of the technological functions that minerals have a certain combination, play and can provide different food processing steps, from the promotion of safety food by reducing microbial flow of food start presenting different aspects sensitivity or susceptibility to direct, indirect or cross-contamination to other well known functions extensively of these nutrients widely used by industry, alone or combined as promoting stabilization of the protein in milk, the solubility of other elements in water or beverages, sustaining the pH of certain food preparations or simply to maintain stable structures within the final products.



ND Pharma & Biotech
MAKING LIFE BETTER

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ND Pharma & Biotech Co. was founded in 2009 and was incorporated in England and Wales in 2012 as a company limited by shares with a total shares amount of in excess 210 M GBP's. People behind company foundation accumulates more than 27 years in the field.

ND Pharma & Biotech Company brings world-class science and products to the global marketplace in the form of innovative products, materials and services.

The company believes that by collaborating with customers, governments, non-governmental-organizations and thought leaders it can be helpful to find solutions to global challenges as providing remedies for certain medical and health conditions that society has to deal now.

We contribute to the society thru the improvement of Pharmaceuticals, Biochemicals, API's, intermediates, reagents, and rare chemicals, trading products, fine and non poisonous ingredients, and many more products, in order to let manufacturers and industry sectors to elaborate healthy foods, beverages, medicines, and many other products suitable for health protection and wellness promotion making it available for people everywhere, meanwhile dependence on toxic chemicals decrease, protecting life and the environment.

ND Pharma & Biotech Company Limited, is a research-based biopharmaceutical company that discovers, develops and commercializes innovative medicines in areas of unmet medical needs and operating and conducting businesses in many other fields and sectors, most of them related to human health as food, nutrition, biosciences, neurosciences, and others.

The company runs operations in a number of countries worldwide and about 60 percent of consolidated net sales are made to customers within the EU actually. Subsidiaries, affiliates and licensees of ND Pharma & Biotech Co., conduct manufacturing, production and/or commercial selling activities.

Are you looking for new
business trends and
technologies to add value to
your stores and improve
sales and profits.

Creating value through Innovation.
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ND Pharma & Biotech is a biopharmaceutical company that discover, develop and commercialize innovative products and therapeutics in areas of unmet medical, food, nutritional, agro, industrial and many other needs. The company mission is to advance the care of people suffering from certain diseases, worldwide and to make life better promoting green chemistry issues and removing certain chemical toxics from our daily lives. Company also acts as a chemical supplier and molecular provider including certain rare molecules and hard-to find compounds, APIs Intermediates, Reactives, etc. Headquartered in Surrey, England, UK, ND Pharma & Biotech Company has operations worldwide thru a network of commercial and industrial partners, both companies and/or corporations.

PreserFood, Acarasin, Moldstop, Mycostop, Glaice, Lactolife, Acqualife, SterilFood, Fruitfresh, Kangen, Akiow, Noopeptil, Nooglutil, Inofish, Zoeltar, Bacterskin, Bacterskin 5000, Pinolipol, Veri-K and Veri-K Series, X-Fresh, Acnifol, Glicospart, Mitoprotect, Citrusol, Inusol, Stevisol, Sucrasol, Acek, 250, PureATP, Aminoprot 100, Asparsol, EcoEtt, Anisakill, Calcior, Ferristat, Chiknsafe, Cocoqwa, Maltolan DRM, Monki, Peppersol, Reduxait, Vegafresh, Sugar 50, Sugar 20, Florafresh, FishFresh, Zelltem, Tancream, Psoriacrem, Ovofresh, Xantamar, Mohostop, PS454 Nitroboost, PS452 Glicobooost, M.A.R.S. (Micro Alcohol Reaction System) and many others, are registered trademarks of ND Pharma & Biotech Co. Ltd. And/or some of its related companies. Marks may not be available everywhere.

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