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## Alsiano has entered into cooperation with Lesaffre Human Care

### Alsiano is new distributor of Lynside® yeast products from Lesaffre Human Care, part of the Lesaffre Group - world leader for baker's yeast and yeast extracts

We are pleased to announce that Lesaffre Human Care has appointed Alsiano their exclusive distributor in the Nordic countries.

The Lesaffre yeast and its yeast fractions present some interesting properties and can for instance support the intestinal balance.

The cooperation with Lesaffre Human Care will therefore strengthen Alsiano's position in the area of bio-actives. Anders Hager, Sales Manager of Alsiano Healthcare states: "We regard this as an important supplement to our current range of bio-actives. In recent years, we have included bio-actives in our portfolio. We consider bio-actives together with our traditional ingredients as a strong mix enabling us to provide full solutions."

Lesaffre Human Care is right now strengthening its position in the health and nutrition sector through the brand Lynside.

### The Lynside® product range

The Lynside® product range is divided into 3 groups:

#### Probiotic yeasts

*Lynside® Pro SCB* (*Saccharomyces cerevisiae* var. *Boulardii*) helps to main-

tain the intestinal comfort and intestinal flora. Yeast prevents the pathogen bacteria development by interacting with the intestinal flora, occupying the mucosa receptor preventing the bacteria to adhere and inhibiting the bacterial toxins. Read more about Lynside Pro SBC on page 2.

#### Yeast fractions

*Lynside® Wall*: source of beta glucans supporting the immune system.

*Lynside® Encap*: encapsulation of lipophilic molecules with small molecular weight (essential oils for example).

*Lynside® YE*: yeast extract rich in peptides, Glutathione, RNA and Nucleotides.

#### Inactive nutritional and fortified yeasts

*Lynside® Nutri*: Inactive dried yeasts rich in Vitamin B, minerals and amino acids.

*Lynside® Forte*: enriched yeast with Selenium, Zinc, Chromium, ... giving an antioxidant (selenium), skin health (Zinc) and glucose metabolism regulation (Chromium) benefit.

Lesaffre yeast and its fractions show promising results in the contribution to intestinal comfort.

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# Lynside® Pro SCB, yeast probiotic boulardii

Lesaffre Human Care, the Nutrition & Health Business Unit of Lesaffre group, is proud to offer Lynside® Pro SCB: a genuine probiotic yeast, very well documented by scientific papers. As a yeast producer, all the efforts have been directed towards a very high quality product

By Lesaffre Human Care

The human digestive tract is home to about 100,000 billion bacteria from approximately 400 different species. These microorganisms weigh more than 1 kg in adults. The stability of this microflora helps people stay healthy. Probiotics contribute to maintaining this delicate balance.

The general benefits of probiotics are: maintaining intestinal comfort, providing preventive and therapeutic effects (i.e. infectious diarrhoea), stimulating the immune system, and more.

## Yeast: an effective probiotic

Yeast probiotics such as Lynside® Pro SCB (*Saccharomyces cerevisiae* var. *boulardii*), present a number of differences from bacteria probiotics:

- Different size, shape and composition
- No sensitivity to antibiotics
- No risk of bacterial resistance transfer
- Not pro-inflammatory
- More resistant to gastric acids and bile salts
- Certain mechanisms of action are different (bacteria/yeast synergy)
- *Saccharomyces cerevisiae* has GRAS and QPS status
- Different consumer message (yeast/bacteria image)

Besides, all live yeast cannot be considered as probiotics. To be eligible for this designation, the strain must survive GI transit (gastric acid and bile salts), be viable and stable in the host and confer a proven health benefit. *Saccharomyces cerevisiae* var. *boulardii* meets the requirements for probiotics.

## Characteristics of Lynside® Pro SCB

### Proprietary strain

Lesaffre's *boulardii* variant is filed with the French National Microorganism Culture Collection (CNCM) - Institute Pasteur, identified under number I – 3799.

### Innocuity

The strain has GRAS status in the US and QPS\* status in Europe. It is cleared within maximum 5 days after stopping administration.

*Saccharomyces cerevisiae* var. *boulardii* yeast has been assessed through many clinical studies, focusing in particular on *Clostridium difficile* infections and antibiotic-associated diarrhoea; the number of positive results in comparison to all studies carried out using the *boulardii* variant is greater than for other yeast and bacteria probiotics.

### Mechanisms of action

Lynside® Pro SBC binds to certain pathogenic bacteria and occupies intestinal receptors, thus preventing bacteria from adhering to the mucous membranes. Moreover, it inhibits bacterial toxins, it has trophic effects on the mucous membrane and anti-secretory effects, and stimulates the intestinal immune system.

### Effective dosage

At least 5x10<sup>8</sup> CFU/day. Lynside® Pro SCB contains at least 20x10<sup>8</sup> CFU/g.

\*In accordance with EFSA QPS qualifications

## Health claims

An article 13 health claim dossier has been filed with EFSA regarding the strain I – 3799. The health claim dossier submitted to EFSA contains the following claims:

- “Intestinal Comfort”
- “Maintenance of the Intestinal Flora”
- “Probiotic”

## References:

1. AFSSA, Effets des probiotiques et prébiotiques sur la flore et l'immunité de l'homme adulte (Effects of probiotics and prebiotics on flora and immunity in adults), February 2005.
2. Gut micro-flora, Example of a Medicinal Probiotic: Lyophilised *Saccharomyces boulardii*; author: Jean-Paul Buts; publisher: John Libbey Eurotext, 2006.
3. Chemical and Functional Properties of Food Components, Probiotics in Food; author: Maria Bielecka; publisher: CRC Press LLC, 2007.
4. Gedek, *Mycoses*, 1999; 42 (4): 261-4.

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# Coming up: Vitafoods International 2009

Look forward to the world's leading nutraceuticals exhibition – Vitafoods International 2009 – taking place from 5-7 May 2009 at Geneva Palexpo, Switzerland

Vitafoods international 2009 is a must for anyone in the functional foods, drinks, nutraceuticals or dietary supplements market. During the 3 days of Vitafoods, there will be a wealth of opportunity to explore as more than 500 companies will be exhibiting. Vitafoods also features VitaTrend, which is a joint initiative from Innova Market Insights and Vitafoods International. See their presentations of the central trends on nutraceuticals and functional foods at stand 519.

In addition, Vitafoods offers Vitafoods International Conference, covering the hottest topics and themes in foods ingredients, and the Finished Products Expo (FPE). FPE brings together companies supplying quality dietary supplements, functional foods and drinks and contract manufacturing services.

## Meet Alsiano's suppliers at Vitafoods International

At Vitafoods, you will have the opportunity to meet the following Alsiano suppliers:

### Afriplex – stand 457

Afriplex specializes in providing high quality plant extracts for food, beverage, pharmaceutical, cosmetic and other industries. Afriplex's products are unique to the Western Cape region in South Africa and they guarantee sustainable production of these indigenous plants. Among the products offered are fruit pulp from baobab, extract from roiboos and flavours.

### Ajinomoto Omnicem – stand 1043

The OmniChem NaturalSpecialities Business Unit is specialized in extraction and purification of botanicals and is today one of the leading polyphenol producers in the world. At Vitafoods, Ajinomoto Omnicem will showcase OmniCoa extracted from

carefully selected cocoa beans to obtain a free flowing granular powder with a very high concentration of cocoa polyphenols (more than 55%).

### Chewycoat by Alsiano – stand 419

Chewycoat is the new generation of centre filled chewing gum and offers a unique opportunity for developing chewing gum products with healthcare benefits. Chewycoat is much different from the traditional way of making chewing gum by extrusion. Get an introduction to the revolutionary Chewycoat concept at the stand, where you can also see different prototypes with bio-actives. Read more about Chewycoat on page 4.

### Enzymotec – stand 244

Enzymotec develops and manufactures innovative lipid based bio-functional ingredients for dietary supplements, functional foods, clinical nutrition and advanced infant nutrition. Their main product categories are cognitive improvement, cardiovascular disease prevention and balanced nutrition for babies and children.

### EPO – stand 218

EPO Srl, established in 1933, produces high quality botanical extracts (dry, fluid, glycolic, liposoluble, tinctures, mother tinctures) obtained from 450 different plants and is particularly specialised in standardised dry extracts. Furthermore, EPO has recently developed purified extracts of Bilberry, Butcher's Broom, Witch Hazel and Centella with high contents of active principles. EPO is officially certified for the production of organic extracts.

### Evonik Degussa – stand 209

Supercritical fluid extraction using carbon dioxide is the answer to the

growing demand for pure and natural substances for applications in the food, beverage, pharmaceuticals and fragrance industries. At Vitafoods, Evonik Degussa will showcase peanut extract produced by their supercritical carbon dioxide extraction process, which opens perspectives for innovative flavour creation: superior quality, excellent shelf life, and high tocopherol concentration.

### GTC Nutrition – stand 1020

Founded in 1988, GTC Nutrition, a business unit of Corn Products International, Inc., is a leading provider of high-quality, science-based nutritional ingredients. The ingredients in GTC Nutrition's product line include, among others, OatVantage™ which you can read more about on page 7. At Vitafoods, GTC will also present Purimune high purity Gos™ which contains 90% galactooligosaccharide to support immune health. Purimune is highly soluble and stable to high shear and low pH.



### Lesaffre Human Care – stand 211

Lesaffre Human Care (LHC), part of Lesaffre Group, focuses on yeast based solutions for health and nutrition needs. With the launch of their new brand, Lyside®, LHC will continue to bring selected yeasts and bioactive yeast components to the market. Their most recent product introduction is ... *(continues on page 4)*

# Chewycoat - new chewing gum for healthcare

Create chewing gum with added value. With Chewycoat and Alsiano's range of bio-actives, ingredients and semi-actives there are lots of opportunities for development of new interesting products for the health conscious consumer

By Tage Vedsted Kusk, Business Dev. Manager, Chewycoat by Alsiano A/S

Chewycoat makes it possible to coat tablets with a layer of chewing gum. All required are the tablets (centre) that you wish to coat, a coating pan and Chewycoat "high gum base containing" chewing gum powder.

Chewycoat offers a great opportunity for creation of health supplements in a new form. Instead of having to swallow a pill, which many consumers may find unpleasant and troublesome, consumers can now literally chew their way to a better health. With Alsiano's comprehensive range of bio-actives, ingredients and semi-actives, there are lots of possibilities for development of new innovative and interesting products with the Chewycoat concept.

## Protection of sensitive ingredients

Due to the process, sensitive ingredients such as vitamins and proteins can easily be incorporated into the chewing gum. The traditional coating process means that the sensitive ingredients are not exposed to any extreme conditions and are in this way well preserved.

## Short process from idea to finished product

There are almost no limits to what can be "chewycoated". Chewycoat is chewing gum made in a completely new way and far from the traditional way of making chewing gum by extrusion. All you need to get started are a coating pan and a product - your centre - which you would like to coat with chewing gum. The centre may already be in your range. It is therefore possible to speed up the development process and in this way get faster to the market.

## The new generation of centre filled chewing gum

An important feature of Chewycoat, differentiating it from other centre filled chewing gum techniques is that you do not have to adapt your product to make a chewing gum version.

It is possible to "chewycoat" almost all shapes and sizes. Another advantage of Chewycoat is that it is chewing gum made without extrusion. This way, you have less stock and fewer semi-finished goods in work compared to traditional chewing gum manufacturing.

With Chewycoat, you get a flexible production process enabling you to produce in variable/smaller batch sizes adapted to different markets.

## Meet us at Vitafoods 2009

Chewycoat by Alsiano exhibits at Vitafoods 2009 from 5-7 May. Visit us at stand 419 and get an introduction to the revolutionary Chewycoat concept. At the stand you will also have the opportunity to see different prototypes with bio-actives.

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>> (continued from page 3)

PRO SCB - a new probiotic. Read more about Lynside® Pro SCB on page 2.

## Roquette – stand 565

At Vitafoods, Roquette will highlight its new sustainable and renewable industry: Microalgae. This innovation strategy was initiated by the launch of a European microalgae programme - ALGOHUB™ - and the takeover of BPS (a European Chlorella manufacturer with its unique production technology), which fulfils customers' expectations in terms of quality and product safety. You can read more

about Chlorella on page 5. Furthermore, Roquette will present their range of functional ingredients.

## Seppic – stand 318

SEPPIC offers a wide range of innovative ingredients for the nutraceutical market including natural extracts (antioxidants...), mineral salts and coating agents. SEPPIC is a company based within the international Air Liquide group. The state-of-the-art resources of Air Liquide allow SEPPIC to create the products needed in tomorrow's markets.

## Solbar Plant Extracts – stand 325

Solbar is global leader in specialty soy proteins and soy isoflavones dedicated to supplying natural soy solutions for all ages and market segments. With three new isolated soy proteins launched recently, Solbar is able to present a growing range for the health and wellness segment. Among their new products are Solpro 957: a low sodium and low viscosity protein and Solpro 958: a low viscosity and clean flavour profile protein designed for dry blend beverages and meal supplements.

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# ALGOMED<sup>®</sup>, Chlorella: European production – innovative process

Chlorella is known for its richness in proteins, mineral salts, lipids, pigments, chlorophyll and carotenoids. ALGOMED<sup>®</sup> (Chlorella) from Roquette is produced in Europe, ensuring a very high degree of hygiene contrary to the open basin cultures conducted in Asia and South America

*By Johnny Pallot, Director of Bio-Produkte Prof. Steinberg and Marion Hoff, Sales Representative, Roquette.*

Chlorella is microalgae that have been produced and consumed in Asia for several decades and it is Japan's leading dietary supplement. While in Asia photosynthetic production is conducted entirely in open air basins or lagoons, European scientists from several countries have developed specific equipment and procedures, all based on the use of closed photobioreactors. Most facilities did not develop beyond the pilot stage, with the exception of one located in Germany, where a group of German industrialists and researchers has built an industrial facility in Klötze near Hannover.

## A facility in accordance with current hygiene rules

One of the distinctive features of the photobioreactors used at this facility is the protection level of the culture medium and so the quality of the microalgae. In Klötze, each photobioreactor consists of a long glass tube within which the micro-alga circulates and multiplies. The Klötze facility comprises 20 units, representing a total of 500 kilometers of tubes, protected within a 3-acre greenhouse. The micro-algae are separated from the culture medium by centrifugation, and then dried by atomization, under conditions that maintain all of their properties. Finally, they are packaged according to customer's requirements.

This European procedure presents the advantage of guaranteeing a very high degree of protection and

hygiene contrary to the open basin culture conducted in Asia and South America, in which it is impossible to guarantee the absence of foreign bodies or pollution of the culture medium, such as bird or insect droppings, phytosanitary products, heavy metals and all forms of dust. The Klötze site is ISO 9001 certified (Quality Management System). Furthermore, an HACCP risk analysis was conducted on the production process and, in accordance with the Roquette Group's commitments to product safety, it will soon meet the requirements of the ISO 22000 standard (Food Safety Management System).

For European users, the German production site presents the additional advantages of proximity and reactivity. It can be inspected and audited at any time during the year. Furthermore, its central European location reduces transport-related ecological costs, an argument to which Chlorella consumers are generally highly sensitive.

## Chlorella : a wealth of cellular elements

Chlorella is commonly thought to have appeared some 2.5 billion years ago, to have survived through the different geological periods and to have disseminated throughout every ecological niche on the globe. This universal presence is a testimony to the wealth of its component elements,

which ensure its autonomy in the most diverse living conditions: proteins, polyunsaturated fatty acids, mineral elements and vitamins, simple and complex carbohydrates, chlorophyll and growth factors.

**Proteins** represent more than 50% of Chlorella's composition. They are readily available and are a source of 20 different amino acids, including 8 essential amino acids. Tryptophan, the rarest of the 20 amino acids used



in the primary sequence of our proteins, present at a 0.3% level, turns into serotonin in the human body. Serotonin is also known as the "happiness hormone".

**Pigments, chlorophyll and carotenoids** are present at high levels and confer their antioxidant properties to the micro-alga. Chlorophyll represents approximately 3% of the dry weight of Chlorella – the highest level in any plant organism. This high level gives its dark green color to the plant. Pheophorbide is a chlorophyll breakdown product. Its level is an indication of the cell state at the time of harvesting: ... *(continues on page 6)*

>> low pheophorbide levels, as indicated in the specification sheet, indicate that the cells were harvested during their growth phase, at the time when they contain their highest levels of active substances. The presence of lutein and of alpha and beta-carotene should also be mentioned. Lastly, Chlorella is rich in many vitamins that contribute to the body's needs.

**Mineral salts** represent approximately 10% of Chlorella composition: potassium, calcium, magnesium, and also trace elements such as iron, zinc and selenium, essential protagonists in cell metabolic reactions.

**Lipids** are present in the same equivalent levels of approximately 10%. These are essential fatty acids polyunsaturated in omega-3 such as alpha-linolenic acid and omega-6, such as linoleic acid.

Chlorella is frequently associated with the concept of "growth factor", or "Chlorella Growth Factor" (CGF). This is the algae's aqueous extract said to contain its main active principles, including those mentioned above. The vast body of literature on Chlorella, built up since the fifties, highlights many other beneficial substances. These include prophyryns, similar to chlorophyll and sporopollenin, which seem to play a role in binding to different contaminants.

### Chlorella: a micro-alga that meets the requirements of modern consumers

Chlorella possesses the regulatory status of conventional foodstuffs. Product promotion in Europe is therefore only possible within this regulatory framework and cannot emphasize certain properties involving "health" claims.

Generally, the studies performed or still in progress on Chlorella concern

3 main properties, which have led to the majority of the product applications:

- Its **detoxification** properties, which could be linked to its ability to bind to heavy metals and various food contaminants such as pesticides and insecticides. These properties are already supported by many studies on animals and humans, which will

cases of arthritis and lead to improvements in the condition of asthmatic patients.

All of these properties have been covered by preliminary clinical studies and trials on groups of individuals. These studies have mainly been conducted in Asia, where the product has been known since the sixties, but also more recently in North America and Europe.

In Europe, because of the regulatory situation regarding claims, complementary studies have to be done in order to reinforce arguments for consumers. The ALGO-HUB™ research program has been designed in this way.



eventually enable Chlorella to be distinguished from the other algae available on the market.

- Its **immune defense strengthening** properties, which led the Japanese scientific community to refer to it as a "biological response modifier". Studies performed principally on animals, but also one study on humans, allow considering that Chlorella may contribute to preserve immune defenses in various conditions.
- Finally, the **inflammatory reducing** phenomena: Chlorella has shown promising results in the case of pilot studies, where it was used as a complementary treatment for certain inflammatory diseases. Many case studies highlight the effect of Chlorella in assisting in the treatment of certain forms of intestinal or skin inflammatory diseases. It would also appear to provide relief in

All that remains is to convey the message to the consumers. In the current context of sensitization to food contaminants, and faced with an aging European population, the above-mentioned claims should carry their weight!

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### Advises for a first use of Chlorella

The ideal daily dose is to take 1 gram of chlorella for 25 kg of body weight. For example:

- for an adult of 75 kg, take 3 grams of ALGOMED® Chlorella, so 10 tablets
- for a child of 25 kg, take 1 gram of ALGOMED® Chlorella, so 3-4 tablets.

In order for your body to accept Chlorella well, you could begin with 2 to 4 tablets per day, and increase the dose taken up to 8-12 tablets /day in one week.

# OatVantage™ – heart healthy solutions from GTC Nutrition

OatVantage™ oat bran concentrate is a natural, highly concentrated oat soluble fibre very rich in beta-glucan, which makes it ideal for supplement products, nutrition bars, capsules, etc.

By GTC Nutrition

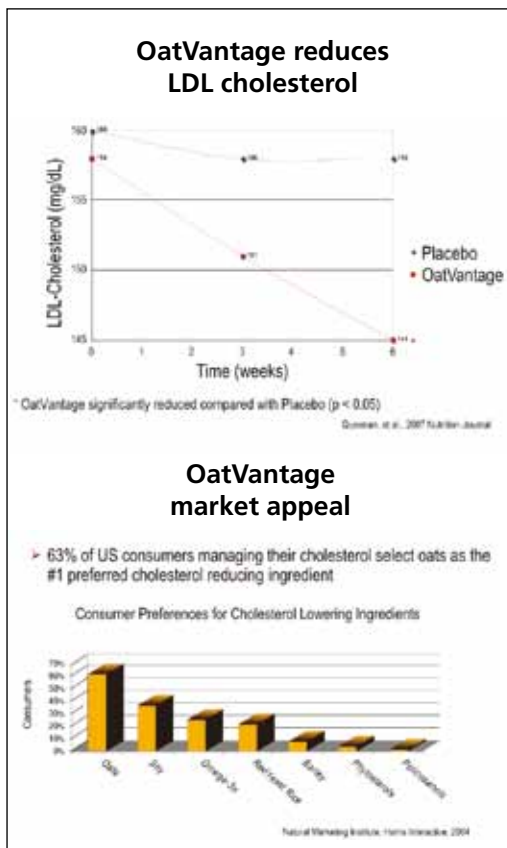
According to the American Heart Association, more than 105 million US adults have high cholesterol. Regular consumption of oats has long been shown to significantly reduce cholesterol levels, especially the “bad” (LDL) cholesterol. OatVantage™ oat bran concentrate is a natural, highly concentrated oat soluble fibre containing 54% beta-glucan, up to 18 times more beta-glucan than regular oats, to support heart health.

OatVantage™ is made from non-GMO North American oats using breakthrough patented milling technology that maintains the integrity of the beta-glucan, enabling oat soluble fibre to be formulated into great tasting

foods and convenient supplements. OatVantage™ can also be used in capsules and, this way, present a natural solution to consumers looking to proactively reduce their cholesterol and maintain their heart health and overall wellbeing.

### Benefits

OatVantage™ functions by increasing viscosity in the digestive system, which slows stomach emptying, prolongs the absorption of energy from a meal and decreases the absorption of fat. These effects exert strong control over insulin release, which reduces cholesterol production to benefit heart health. OatVantage™ provides the opportunity for cholesterol benefits in a small, convenient serving.



### Potential health claims

OatVantage™ health benefits include:

- A diet low in saturated fat and cholesterol that includes 3 gram or more per day of beta-glucan soluble fibre from whole oats may reduce the risk of heart disease.
- Diets rich in oat bran may reduce the risk of heart disease.
- Enriched with oat bran for the healthy heart.

### About GTC Nutrition

GTC Nutrition is a recognized global leader in providing innovative, customized ingredient solutions along with scientific, technical and marketing expertise to the food processing, dietary supplement and animal feed industries.

Visit [www.gtcnutrition.com](http://www.gtcnutrition.com) for more information.

### Customer support

GTC Nutrition helps customers differentiate their product offerings through co-branding. By leveraging the power of our branded ingredient solutions, manufacturers are able to showcase the unique health benefits and value-added functionalities of their fortified products. Our scientific, marketing and technical expertise will support you from product concept to launch through:

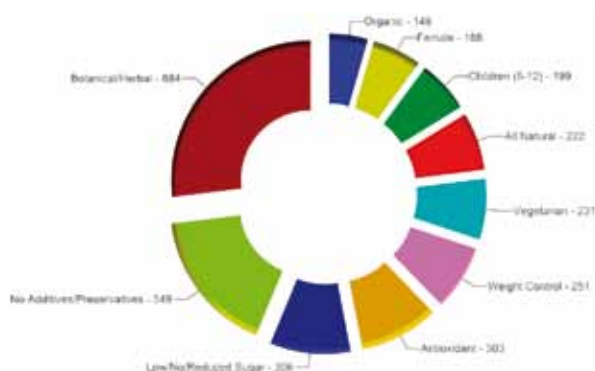
- Scientific, market and consumer research
- Product development
- Sales training and educational materials
- In-store promotion
- Jointly sponsored advertising
- Public relations campaign

# Roquette – much to offer in nutraceuticals

Roquette offers a wide range of valuable ingredients and nutraceutical actives that can support the requirements of a rapidly expanding and increasing vitamins and dietary supplements market

By Elham Blouet, Pharmaceutical Project & Development Manager, Roquette

Roquette's large range of ingredients enables formulations that are not only appealing to the end-consumer, but also easy-to-use, stable and robust for the formulator.



Vitamins & Dietary Supplements (VDS) launches in 2007 by claims (source GNPD).

According to the database GNPD Mintel review (Global New Products Database), 3304 products were referenced in 2007 as new products in the Vitamins & Dietary Supplements (VDS) sub-category. The top 10 claims for VDS are shown hereafter:

## Herbal products

Herbal/botanical claims represented 27% of total VDS product launches in 2007. This reflects the consumer's consciousness of the medicinal properties attributed to plants and their extracts. Many different herbals are used in VDS for a variety of treatments: weight management, energy input, antioxidant properties, immunity, digestion aid, blood circulation, etc. This explains why herbals/botanicals come first in the top 10 claims.

It is well known that herbal extracts are usually very difficult to formulate: poor organoleptic properties that need to be masked, highly hygro-

scopic, waxy nature, poor flowability and poorly compressible, often used in high doses, making the formulation even more difficult.

## LYCOAT® and KLEPTOSE® for taste masking

Taste masking can be achieved through different means depending on the characteristics of the herbal product and on the dosage form. Film coating of solid dosage forms is often sufficient to taste-mask the herbal ingredient formulated in conventional swallowable tablets.

Roquette's LYCOAT® film coating polymer (modified pea starch) and ReadilyLYCOAT™ ready-to-use film coating solution have proven their efficiency on taste masking of herbal products in swallowable tablets. In addition, LYCOAT® and ReadilyLYCOAT™ exhibit inertness and good compatibility with herbals, whereas hydroxy propyl methyl cellulose (HPMC) is known to interact with some herbal extracts leading to stability problems and making the coating process unfeasible.

Molecular encapsulation of some compounds is also an excellent way to mask unpleasant tastes or odors. KLEPTOSE®, brand name of a range



of native beta-cyclodextrin (BCD), is known for its ability to form inclusion complexes with certain substances making them more palatable. The most famous example is garlic oil taste masking with KLEPTOSE® BCD that is efficient not only when swallowing the tablet, but also minimizing aftertaste.

## PEARLITOL® for chemical stability

Herbal ingredients are rather unstable and reactive products that need to be stabilized in formulations. Hygroscopicity, waxy nature and risk of oxidation are common problems associated with herbals.

PEARLITOL®, brand name of mannitol, is a versatile excipient that can be used in all dosage forms with the following benefits:

- chemical inertness: mannitol does not react chemically with other components
- non hygroscopicity: mannitol ensures low hygroscopic formulations
- hydroxyl scavenger: mannitol is known to prevent oxidative degradation of other ingredients
- high compactibility: PEARLITOL® SD and DC grades allow easy directly compressible formulation

PEARLITOL® is available as crystalline powder (PEARLITOL® C) and granulated powder (PEARLITOL® SD and DC) for direct compression. Different particle size is available within each range.

## PEARLITOL® and STARLAC® for efficiency in compression

Due to poor compactibility properties and required high dosages, herbal extracts are very difficult to formulate by direct compression.

STARLAC® lactose-starch compound, a versatile excipient, is... (continues >>)

>> suitable for direct compression and dry granulation. Its efficiency has also been demonstrated in herbal based tablets requiring quick disintegration.

When a combination of properties such as high compactibility, inertness and stabilizing power are required for an excipient in herbal based formulation, PEARLITOL® mannitol is the best choice.

### Clean labelling

Consumers are more and more reluctant to use products containing various types of chemical ingredients. Therefore, the increase in interest for products without antimicrobial preservatives or additives, and without sugars or with low sugars, respectively ranked 2 and 3 for VDS claims in 2007.

### PEARLITOL®, LYCASIN® and NEOSORB® benefits in microbial and chemical stability

Whenever possible and by using appropriate excipients or processes, microbial and chemical stability of formulations can be achieved without the use of antimicrobial preservatives, antioxidants or other additives.

The microbial stability of solid dosage forms is very often ensured by the low water activity of these solid dry formulations. Thanks to its different properties (non-hygroscopicity, inertness, OH's scavenger ...), PEARLITOL® mannitol can largely contribute to the chemical stability of solid dosage forms.

An appropriate control of water activity of liquid dosage forms can be achieved by using polyols solutions. LYCASIN® brand name of maltitol solutions and NEOSORB® brand name of sorbitol solutions are effective tools for stabilizing liquid dosage forms against microbial growth and hence avoiding the use of antimicrobial preservatives.

### Roquette's range of polyols for sugar-free or low in sugars

The growth in consumer's health-consciousness is reflected in the sig-

nificant increase in the number of products claiming sugar-free or low sugar content. Roquette's full range of polyols and long expertise in sugar-free formulations make Roquette an ideal partner for developing true sugar-free formulations appreciated by consumers, without any compromise on the taste and functionality.

Polyols like NEOSORB® sorbitol solution, NEOSORB® P sorbitol powder, PEARLITOL® mannitol powder, SweetPearl™ maltitol powder, XYLI-SORB® xylitol powder, and LYCASIN® maltitol solutions are true sugar-free ingredients and they also have a low glycaemic response.



### Antioxidant claim products

The main part of products with antioxidant activity claims launched on the market contain not only vitamins A, C and E, but also specific antioxidants such as carotenoids, omega 3, lutein, glutathione, etc. Plant extracts are also often used for their antioxidant activity, especially green tea, grape extracts and berries.

Many of the above listed ingredients are very sensitive and need to be protected against degradation.

PEARLITOL® mannitol with its hydroxyl radical scavenging properties and KLEPTOSE® native beta-cyclodextrins with its encapsulation power are useful tools in stabilizing such ingredients in their final dosage forms.

### Weight management

Whatever the country or target population, weight management is a more and more important issue for many consumers: children, females, males and seniors. Many products for weight management consist of plants extracts for their fat burning properties. Dietary fibres are also often used as they can have a strong impact on weight management.

### NUTRIOSE® as dietary fibre

Fibres are well known for their effect on satiety: eating fibres helps in reducing the total dietary intake. Fibres also are known for their role in stabilizing blood sugar and cholesterol levels, reducing the risk of certain illnesses. Fibres can be insoluble or soluble; both forms are important in the diet and must be well balanced.

Unlike many soluble dietary fibres, NUTRIOSE® soluble fibre (special dextrin) provides excellent digestive tolerance and prebiotic health advantages. In addition, its properties such as instant and complete water solubility and high stability make the use of NUTRIOSE® of great interest in a wide range of applications.

### Natural origin products

Roquette's range of products is derived from maize, wheat, pea and potato. These vegetable origin products include native and modified starches, hydrolyzed products and polyols.

Therefore, Roquette's range of products with its natural origin is ideal and very attractive both for persons adopting a "natural" way of life (ranked 7 in the VDS claims for 2007) and for vegetarian people (ranked 6 in the VDS claims for 2007).

Should you need any formulation advice, please do not hesitate to visit Roquette's website dedicated to nutraceuticals: [www.roquettenutra.com](http://www.roquettenutra.com).

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# The Alsiano Healthcare team

## Key accounts



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## Pharmaceuticals - cosmetics health & nutrition



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## Pharmaceuticals - cosmetics health & nutrition



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