

Ingredient of the Month

IN THIS ISSUE:

Ingredient of the Month 1

Company Behind the Ingredient 2

Newest Ingredient Uploads 3

Danisco & Nutrafiles Collaboration 3

Immune Industry News 4

Contact Information 5

Pea Proteins, trend supporting ingredient for healthy nutrition

The paramount role of proteins in our nutrition is undisputed. Proteins are often designated the building blocks of life, and are essential as most tissues, hormones and enzymes are protein based and thereby regulate biological processes.

Proteins are essential for growing muscles and skeletal bones at a young age, maintaining a good working lean body mass in adult age, and maintaining appropriate supply throughout the ageing years.

Health conditions related to protein deficiency are considered to be health conditions such as sarcopenia, loss of muscle mass, seen in very old and typically sedentary people where prevalence is estimated in cohort studies to be 18-24% in elderly women and 24-27% in elderly men; i.e. people aged +65. Muscle atrophy is also seen as a reality in relation to long term serious diseases. In general a good nutritional quality protein supply is quite important for people eating very little.

On the contrary, the roles of good quality proteins also have important health functions for overweight people who are in need of satiety regulations in order to reduce food intake. During the recent decades, gut hormones have started to occupy a central place

in understanding the complex neuro-endocrine interactions that underlie the regulation of energy balance. Many gut peptides have been shown to influence satiety, and some may be related to de novo peptides created by protein digestion. Studies have shown that increased protein intake sustained weight maintenance by favourably regaining lean body mass and increasing satiety independent of energy intake or dietary restraint - the principle behind many weight management products today.

The pea protein ingredient Nutralys S85F has scored a top score on the Nutrafiles health parameter due to the above mentioned facts, and the suitability to act as a nutrition protein being appropriate for most age groups.

Also interesting, this pea protein has an amino acid composition high in arginine and lysine. Arginine is considered to be involved in anabolic effects, i.e. muscle building, by its essential role for creating Creatine, essential for the muscle functions. The metabolite of Arginine is Nitric Oxide, essential for blood vessel relaxation, is under intensive research these days in relation to balanced circulatory health. Lysine is important for proper growth, and it plays an essential role in the production of Carnitine; a nutrient responsible for converting fatty acids into energy and helping to lower cholesterol.

Additionally this ingredient supports the growing consumer demands of vegetarian/flexitarian products with a sustainable agricultural footprint.

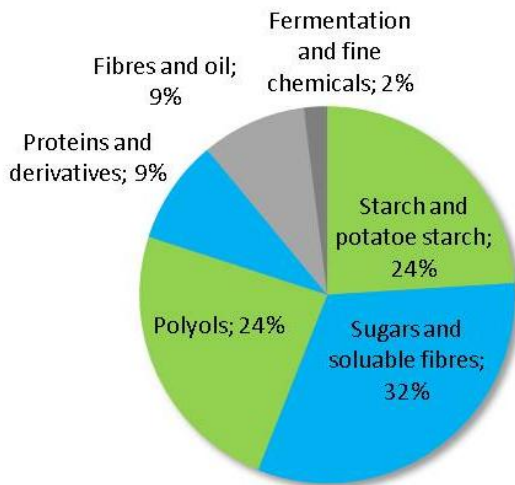
*To Unsubscribe to this newsletter click [HERE](#)



French agro-industrial group with international presence

Roquette is an international family business located in France and operates from 17 state-of-the-art production plants in Europe, Asia and the USA. With a turnover of over 2 billion Euros, the group employs over 6,000 people worldwide. Since its creation 75 years ago, Roquette has become one of the world's top 4 starch manufacturers. Each year, it processes more than 6 million tons of renewable agricultural raw materials – maize, wheat, potatoes, and peas – to starch and starch derivatives. Roquette processes these resources to an extended range of high quality ingredients and sells them to their customers in different application areas.

Production Range



Roquette is among the world leaders in processing agricultural raw materials for the needs of five major industrial sectors; human nutrition, animal nutrition, paper – corrugated cardboard, pharmacy – cosmetology, and chemistry – bio industry. Roquette has a long history in the agriculture industry and determined to keep its place. To better meet its customers' expectations,

Roquette has developed a worldwide network. Backed by a stable and secure financial structure fostering continuity and development, their reputation has been built on research of international status, some of the most advanced production facilities in the world, a global network of offices and agents – and a uniquely comprehensive, proven service philosophy.

Roquette's sustainable innovation strategy revolves around two areas: nutrition-health and plant chemistry. The group rests its innovation strategy towards Nutrition health on implementing the NUTRAHUB® program. Its objective: to supply the food and pharmaceutical industries with new functional ingredients.

For the food industry, human nutrition, Roquette produces **NUTRALYS® pea protein** which is a highly purified GMO-free protein with amino-acids content close to that of the ideal protein as recommended by FAO/WHO. It is a supplement rich in lysine and arginine, with potentials for protein rich, allergen free and vegetarian food, health snacks and sport and nutrition bars and blends. The ingredient scores high in the health parameter with an overall score of 31, NUTRALYS is the Nutrafiles Ingredient of the Month for March.

More information on www.roquette.com

Newest Ingredient Updates



Metabolism
Appl'in
Enliten
Fenugum
KIONutrime-Cs
Maltidex
Pinnothin
Splenda
Unicell



Immune
KIONutrime-CG
Berrydefence
Howaru Bifido
Howaru Dophilus
Howaru Rhamnosus



Performance
MenaQ7
Nutralys S85F



Cognitive
Eye q



Skeletal
Arthred

Ingredient Supplier Collaboration Paying Off

Industry leader Danisco A/S collaborated with Nutrafiles to get an external view on their ingredients. Now profiles for the majority of Danisco's health ingredients are available for Nutrafiles users.

See Danisco's Collaboration Press Release [HERE](#)

Contact us to collaborate with Nutrafiles and get your company's health ingredients profiled at no cost.

info@nutrafiles.com

Industry News

Vitamin D crucial to activating immune defenses

Scientists from the Department of International Health, Immunology and Microbiology have discovered that Vitamin D is crucial to activating our immune defenses and that without sufficient intake of the vitamin, the killer cells of the immune system - T cells - will not be able to react to and fight off serious, life-threatening infections in the body.

Calcium supplement tablets, with vitamin. Photo: Wikimedia Commons GNU

For T cells to detect and kill foreign pathogens such as clumps of bacteria or deadly viruses, the cells must first be 'triggered' into action and 'transform' from inactive and harmless immune cells into killer cells that are primed to seek out and destroy all traces of a foreign pathogen.



The researchers found that the T cells rely on vitamin D in order to activate and they would remain dormant, 'naïve' to the possibility of threat if vitamin D is lacking in the blood.

- "We have discovered that the first stage in the activation of a T cell involves vitamin D, explains Professor Carsten Geisler from the Department of International Health, Immunology and Microbiology. When a T cell is exposed to a foreign pathogen, it has an immediate biochemical reaction and extends a signaling device or 'antenna' known as a vitamin D receptor, with which it search for vitamin D. This means that the T cell must have vitamin D or activation of the cell will cease. If the T cells cannot find enough vitamin D in the blood, they won't even begin to mobilise."

T cells that are successfully activated transform into one of two types of immune cell. They either become killer cells that will attack and destroy all cells carrying traces of a foreign pathogen or they become helper cells that assist the immune system in acquiring "memory". The helper cells send messages to the immune system, passing on knowledge about the pathogen so that the immune system can recognize and remember it at their next encounter and launch a more efficient and enhanced immune response. T cells form part of the adaptive immune system, which means that they function by teaching the immune system to recognize and adapt to constantly changing threats.

Activating and Deactivating the Immune System

For the research team, identifying the role of vitamin D in the activation of T cells has been a major breakthrough.

- "Scientists have known for a long time that vitamin D is important for calcium absorption and the vitamin has also been implicated in diseases such as cancer and multiple sclerosis, but what we didn't realize is how crucial vitamin D is for actually activating the immune system - which we know now."

The discovery, the scientists believe, provides much needed information about the immune system and will help them regulate the immune response. This is important not only in fighting disease but also in dealing with anti-immune reactions of the body and the rejection of transplanted organs. Active T cells multiply at an explosive rate and can create an inflammatory environment with serious consequences for the body. After organ transplants, e.g. T cells can attack the donor organ as a "foreign invader". In autoimmune disease, hypersensitive T cells mistake fragments of the body's own cells for foreign pathogens, leading to the body launching an attack upon itself.

The research team were also able to track the biochemical sequence of the transformation of an inactive T cell to an active cell, and thus they could intervene at several points to modulate the immune response. Inactive or 'naïve' T cells crucially contain neither the vitamin D receptor nor a specific molecule (PLCgamma1) that would enable the cell to deliver an antigen specific response.

The findings continue Professor Geisler "could help us to combat infectious diseases and global epidemics. They will be of particular use when developing new vaccines, which work precisely on the basis of both training our immune systems to react and suppressing the body's natural defenses in situations where this is important - as is the case with organ transplants and autoimmune disease."

Most Vitamin D is produced as a natural byproduct of the skin's exposure to sunlight. It can also be found in fish liver oil, eggs and fatty fish such as salmon, herring and mackerel or can be taken as a dietary supplement.

Publication

The findings are published in the latest edition of Nature Immunology, (Vitamin D controls T cell antigen receptor signaling and activation of human T cells) [HERE](#).

Source:

University of Copenhagen News Article published 2010-03-07.

[LINK](#)

Nutrafiles:

New - Small Enterprise License:

Price: 2250 Euro / 3025 USD

- Package price for small enterprises or specialized teams working with the health and nutrition industries
- Includes up to 4 users at the VIP all health areas access
- Register [HERE](#)

Nutrafiles Walk-Through Webinars

Next Webinars:



Friday, March 12, 2010, 10:00 CET



Friday, March 26, 2010, 10:00 CET

*Register [HERE](#)

Contact Information:

bio2com
mind the gap in markets

Bio2com Aps
Skt. Clemens Torv
15, 3 mf
DK-8000 Aarhus C
Denmark

Tel.: +45 75763338
info@bio2com.com
www.bio2com.com
www.nutrafiles.com

The people behind **Bio2com ApS** are experts within the value chain between science and consumer nutrition. Bio2com supports industries in need of commercial research, assistance and advice. Bio2com ApS specializes in market trends, NPD intelligence and supporting new business projects on health ingredients and bioactive compounds. The company holds a high expertise level within biology and the nutraceutical industry.