



## Yeast rich in selenium in functional food: Fortifying food the natural way

**Monday, October 5, 2009- Lal'Food, the functional food Business Unit of Lallemand in Europe is pleased to announce that several health claims concerning selenium have just been accepted by EFSA, the European Food Safety Agency.**

Selenium is today highly recognized for its many health benefits and antioxidant properties, supported by solid scientific documentation. This has prompted EFSA Panel on Dietetic Products, Nutrition and Allergies to accept health claims linking the dietary intake of selenium to: *“protection of DNA, proteins and lipids from oxidative damage, normal function of the immune system, normal thyroid function and normal spermatogenesis.”*

Lalmin™ Se is an inactivated whole cell yeast containing elevated levels of organically-bound selenium as L(+)-selenomethionine, a form readily available for the body. **Lalmin™ Se is produced from a specific yeast strain, *Saccharomyces cerevisiae* NCYC R397**, selected for its ability to assimilate large amounts of selenium into selenomethionine.

Ever since EFSA has issued its **positive scientific opinion on the safety of selenium yeast in foods** in 2008, Lal'Food has been intensifying the development of solutions integrating Lalmin™Se into a range of food applications: cereals, cereal-based products, nutritional biscuits, drinks ...

Not only selenium yeast has been recognized completely safe, but the EFSA's Panel also looked at the bioavailability and metabolism of the mineral source. It was concluded that yeast with high levels of organically bound selenium, such as **Lalmin™ Se, was up to twice as bioavailable than inorganic forms of selenium**, like selenite or selenate.

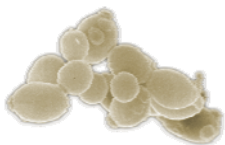
In addition to the enhanced bioavailability, working with Lalmin™ Se offers a **natural image of fortification**: yeast naturally converts the mineral selenium into organically-bound selenium (selenomethionine, selenocystein) during its fermentation.

This organically-bound form (99% of the total selenium content) represents the most bioavailable source of selenium. In this form, selenium is easily available, that means better absorbed and retained by tissues and cells.

EFSA's Panel also stated that selenium yeast offers innocuousness as a safer source of selenium when compared to inorganic forms of selenium such as selenite or selenate. This has been shown according to toxicity studies (Rayman *et al*, 2004).

Last but not least, Lalmin™ range of mineral enriched yeast provides **a set of technological benefits for food applications**:

- Lalmin™Se offers **an easier & safer dosage** when compared to inorganic selenium sources. Since its selenium concentration reaches up to 0.2%, the dose to be incorporated will be easy to blend within the final product, consequently guaranteeing good homogeneousness.
- Incorporating a dose equivalent to 100% of the Recommended Daily Allowance (R.D.A) (55µg /dav for adult men and women according to the US Food and Nutrition Board -National



*S. cerevisiae* yeast cells



Academy of Science-), corresponds to 27.5 mg of Lalmin™ Se 2000 (Lalmin™ Se 2000 contains 2000 ppm of selenium). An amount that will affect nor the taste, nor the color of the finished product.

- Lalmin™Se can be blended directly within the others ingredients of the final product, at any stage of the manufacturing process thanks of its resistance to a wide range of food processes.

Thanks to these combined properties, Lalmin™Se **enables the fortification of a large array of food and drinks with bioavailable selenium**, ranging from biscuits to meal substitutes, ready meals to pasteurized fruit juices or milk etc.

**In conclusion, Lalmin™ Se offers to food and drinks products:**

- a natural, easy to dose, flexible and safe source of selenium
- a key mineral for the organism, with EFSA approved health claims
- an efficient innovative solution to meet the need of today's health-conscious consumers

#### **About Lal'Food:**

*Lallemand, Inc. is a privately owned Canadian company specialized in yeast, bacteria and yeast derivatives, for the human and animal nutrition, baking, winemaking and pharmaceutical industries. Lallemand is the only major supplier of yeast and bacteria that is also the primary producer of both. Lal'Food, the food business unit of Lallemand in Europe, focuses on integrating its clinically and scientifically documented probiotic strains and other health ingredients, such as highly bioavailable mineral yeast and natural anti-oxidants, into various innovative food applications, including chocolate, fruit juice, cereals, ice cream, and others.*

#### Contacts:

Bruno Delattre  
Europe Business Director  
Tel.: +33 (0)5 62 74 555  
E-mail: [bdelattre@lallemand.com](mailto:bdelattre@lallemand.com)

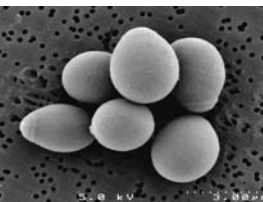
#### Media Relations:

Sylvie Roquefeuil-Dedieu  
Press Officer  
Tel.: +33 (0)6 8472 7610  
E-mail: [sroquefeuil-dedieu@lallemand.com](mailto:sroquefeuil-dedieu@lallemand.com)

Jim Kopp  
Vice-President  
Lallemand/American Yeast  
Tel.: +1 (832) 338-8753  
E-mail: [jkopp@lallemand.com](mailto:jkopp@lallemand.com)

#### References:

RAYMAN M.P., *The use of high-selenium yeast to raise selenium status: how does it measure up?* British Journal of Nutrition (2004), 92, 557–573



*S. cerevisiae* yeast cells

**LALLEMAND**