

innovations IN FOOD TECHNOLOGY



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Probiotics, Glutathione, Selenium, Peptides . . .

Some trends in Health and Human Nutrition are here to stay; overall well-being and fitness; vitality, anti-aging, antioxidants, maintain lean muscle mass, and balance of micro-organisms residing in our body. Lesaffre Human Care offers new ingredients derived from yeasts to help product developers throughout the world in capitalizing on such healthy trends.

SUMMARY

- A) Introducing a probiotic proven different from the current *boulardii*, the second generation of probiotic yeast
- B) Meeting the challenge of age and cellular oxidation: Glutathione
- C) Staying healthy and fit: using small yeast peptides

1. Introducing a probiotic proven different from the current *boulardii*, the second generation of probiotic yeast

Lesaffre currently offers *Saccharomyces cerevisiae* variant *boulardii* and will launch the new probiotic yeast with positive clinical data

Currently, probiotics are one of the strongest segments with sustained growth within the dietary supplements industry. Probiotic research continuously adds credibility to the billions of natural habitants in the human gastrointestinal tract. Lesaffre is contributing to the existing knowledge of probiotics in two ways.

First, Lesaffre produces and sells *Saccharomyces cerevisiae* variant *boulardii*, a probiotic which helps to provide intestinal comfort and maintain intestinal flora. *Boulardii* is already known for reducing the risk of antibiotic associated and traveller's diarrhoea. Yeast probiotics are complementary to bacteria



probiotics with applications in dietary supplements and functional foods. Lesaffre recently conducted a consumer focus study and found that yeast in dietary supplements were perceived more natural and healthier than bacteria (detailed study is available upon request).

Manufacturers are adding probiotics to foods, the challenge here is to add pro-biotics without compromising their viability and activity. Lesaffre is working with the company CapAble to add *Saccharomyces cerevisiae* variant *boulardii* into beverages. The yeast is stored in a sealed bottle cap and released by consumers into their beverage at the time of consumption.

Second, Lesaffre has developed a new probiotic; this is the first probiotic yeast ever to be launched after the introduction of *boulardii*. After 5 years of extensive R&D work including a successful large scale clinical study, Lesaffre is about to submit a health claim file to the EFSA.

2. Meeting the challenge of age and cellular oxidation: Glutathione

Lesaffre offers yeast extract containing 5% of reduced glutathione (8% of equivalent glutathione)

There are a lot of antioxidants in our foods and supplements. We often forget the principal antioxidant, a tiny molecule hidden in human cells, called glutathione. Glutathione is essential to fight against free radicals that are harmful in the body. We have to constantly replenish this anti-oxidant to achieve optimum health.

Despite the documented importance of glutathione, there is no recommended daily intake for this tripeptide.

The synthesis of glutathione is limited by cysteine, a sulphur-containing amino acid. We need a significant amount of cysteine to ensure the synthesis of glutathione. Lesaffre develops and sells a yeast extract

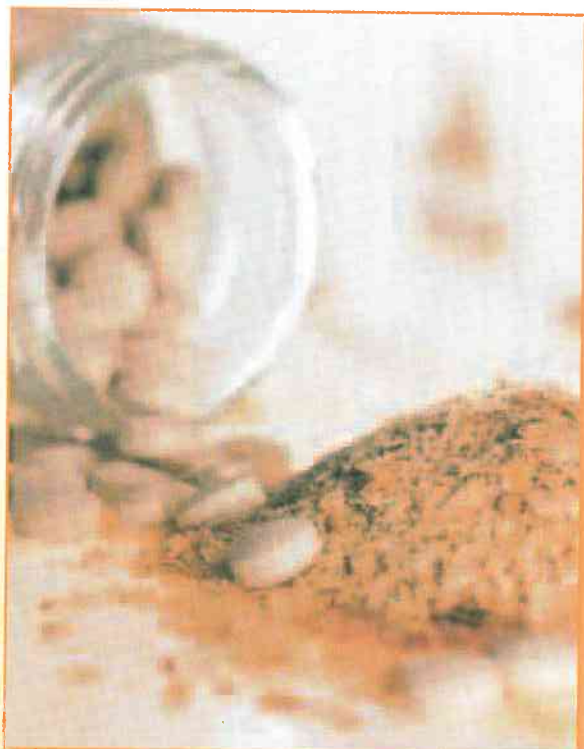
Lynside® YE Glutathione (GSH) that is rich in reduced glutathione and in its precursors (γ Glu-Cys, Cys).

Lynside® YE Glutathione contains the essential amino acids to maintain optimum glutathione level in human.

3. Staying healthy and fit: functional small peptides

Lesaffre offers yeast peptides for weight management and sport performance

Proteins are known for their nutritional role. Many established studies found that proteins are able to promote satiety and to maintain lean muscle mass. Hence they are essential ingredients used in weight management and sport nutrition products. These two markets are constantly



looking for alternate protein sources, this is the reason for Lesaffre to introduce Lynside® YE Pept-A.

Lynside® YE Pept-A is a yeast fraction which is made of small peptides obtained by enzymatic hydrolysis of the *Saccharomyces cerevisiae* proteins. Such yeast peptides are assimilated more rapidly than intact proteins; this is the concept of "fast proteins". Lynside® YE Pept-A contains all of the essential amino acids, especially the Branched Chain Amino Acids (BCAA) which are recognized for muscle protein metabolism. Lynside® YE Pept-A complements other proteins in savoury formulations such as soups, dips, and bars. Savoury products are good alternates to conventional sweet products common in weight control and sport nutrition markets. Formulation based on Lynside® YE Pept-A are available for R&D teams.

Conclusion: The tiny yeast combine images of nature and health providing much more nutritional benefits than B complex vitamins and minerals.

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