



TECH NEWS



HOW THE MANY BENEFITS OF YEASTS CAN ADD VALUE TO PET FOOD AND IMPROVE THE LIVES OF OUR PETS

As guardians of their pets, owners are increasingly concerned with safeguarding the health of their animals. Yeasts, as natural, healthy and well-accepted ingredients, can provide a competitive advantage by addressing several pet food market needs.

Phileo benefits from Lesaffre's 150 years of experience with yeast solutions

"PHILEO" IS DERIVED FROM THE GREEK VERB "TO LOVE" AND IS ASSOCIATED WITH A SPIRAL THAT ILLUSTRATES A NEW MOMENTUM AND OPENNESS TO THE FUTURE; PHILEO HAS A PHILOSOPHY: RAISING LIFE.

Companion animals are now considered family members in our households, and are given the same care and the same rights. As part of its 'Raising Life' mission, Phileo is aiming to enhance the value of pet products by using natural health solutions.

The pet food industry has to meet the growing demand for high-quality products from pet owners (safety, wellbeing, health, etc.).

Finding new solutions to meet the needs of future generations is a challenge that Phileo Lesaffre Animal Care embraces: we strive to improve peoples' lives by improving the lives of their animals.



Actisaf® production plant in Marcq-en-Baroeul (France)



Phileo

LESAFFRE ANIMAL CARE

A KEY PLAYER IN YEASTS AND FERMENTATION WORLDWIDE

Lesaffre designs, manufactures and markets innovative solutions for baking, food taste and pleasure, healthcare and biotechnology. Lesaffre is a family group created in northern France in 1853 and now a multinational and multicultural company which is committed to better feed and protect the planet.

Innovation

Research and Development are the key drivers of Lesaffre's success and the company generates technical and industrial solutions to support its customers' own innovation processes. More than 200 researchers work with some 60 universities and research centres worldwide, and the development of high-quality products which have been tested and proven to be safe is the company's priority.

Proximity

With products marketed in more than 180 countries, Lesaffre is more committed than ever to being the key partner for all its customers throughout the world. Lesaffre has 56 industrial sites and employs more than 9,600 collaborators worldwide.

Transfer

Lesaffre; more than 160 years of history built on tradition and the transfer of its expertise on this well-known natural product.

PHILEO, THE ANIMAL HEALTH AND NUTRITION BUSINESS UNIT OF LESAFFRE.

Backed by more than 30 years' experience and a global staff of 140 people, Phileo Lesaffre Animal Care is positioned in the health-through-nutrition sector located at the crossroads where livestock farming (focused on performance through nutrition) meets medicine (focused on treatment with antibiotics and vaccines).

Phileo has a dedicated R&D department with engineers, nutritionists and veterinarians who work closely with the Lesaffre Group R&D department, a network of reference research centers and universities across the globe.

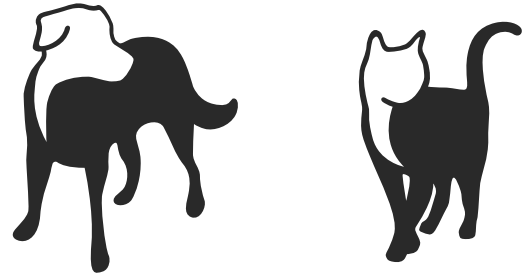
Phileo provides nutritional solutions based on live yeasts, yeast fractions and yeasts rich in organic selenium. These solutions are backed up by a great deal of significant scientific research, commercial use, quality testing and accreditation, such as FAMI-QS, GMP+ B3. The industrial group also continues to support innovation in animal nutrition, to develop the efficacy of fermentation-based products further.

Ways in which evidence-based Phileo solutions contribute to enhancing animal health and performance, include:

- Improving digestibility and bioavailability for better feed efficiency and performance
- Providing cost-effective nutritional alternatives, and substitutes for unsustainable or limited feed sources, and functional native yeast proteins

- Controlling the risks associated with bacterial toxins and mycotoxins through binding and detoxification
- Improving immune response and digestive health in preventive management
- Reducing pathogen pressure to help limit the risk of antibiotic resistance
- Optimizing physiological mechanisms to combat stress and support animal welfare

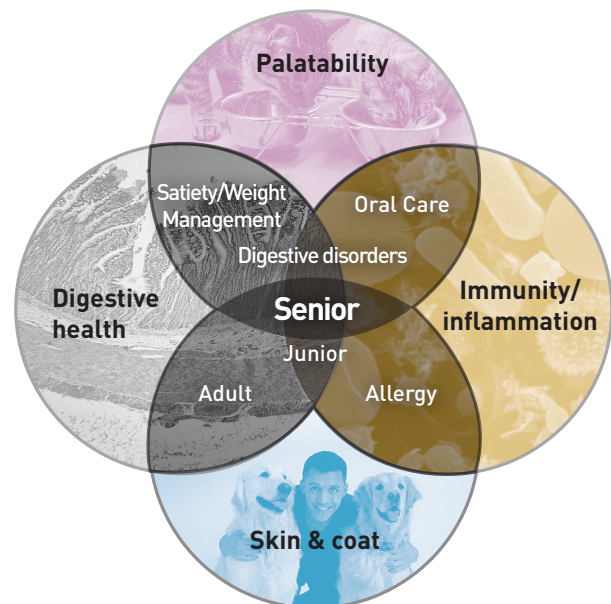
PHILEO IS NOW ENTERING CAT AND DOG HEALTH THROUGH NUTRITION



Phileo now brings Lesaffre Group expertise to the pet food industry.

Yeasts and yeast products are indeed located at the crossroads where several health benefits relevant to our beloved pets meet: food acceptance, digestion, coat condition, protein quality, and immunity. These products are well-perceived by owners, and their multiple effects make them competitive ingredients, as they address several market needs while keeping recipes simple.

Yeast-based solutions: at the crossroads of key pet food challenges



In black: main benefit of yeast

In white: pet food sector which can benefit from yeast

A complete program of yeast-based solutions will therefore cover all cat and dog life stages, from birth to senior, which can contribute to consumer brand loyalty.

Two strategic areas of development for these natural and sustainable pet health solutions have been selected: immunomodulation and gut health.

Immunomodulation

The immune system is a complex defense system which protects cats and dogs from environmental stress, pathogen infection, etc., and interacts closely with inflammatory processes. When properly activated, these protection systems help restore homeostasis but, when over-challenged, they can become detrimental to cat and dog health. It is therefore not simply a matter of stimulating immune function or reducing inflammation, but is about balancing these processes to restore the best pet health in relation to age, type of challenge, homeostatic context, etc.

Phileo understands how to regulate these interacting mechanisms for the well-being of the animal thanks to its strong scientific expertise at both cellular and molecular levels. **Safmannan®** is a premium yeast parietal fraction, and is rich in natural active ingredients such as mannans and β -glucans. These fractions have already shown some interesting effects, increasing ileal IgA, reducing *E. coli* counts and improving digestibility in adult dogs (Middelbos *et al.* 2007).

As the gut is the main entry route for antigens, probiotics can also help adult animals to tailor their immune system in order to be better prepared.

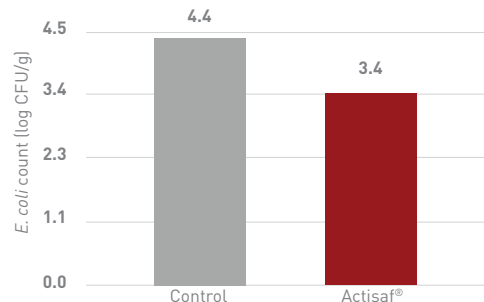
Selsaf® is a premium yeast, rich in selenomethionine and selenocysteine, which has demonstrated a dual protective effect, reducing both oxidative and pathogenic stress in animals. These benefits are of particular interest in the ageing pet population.

Digestive health

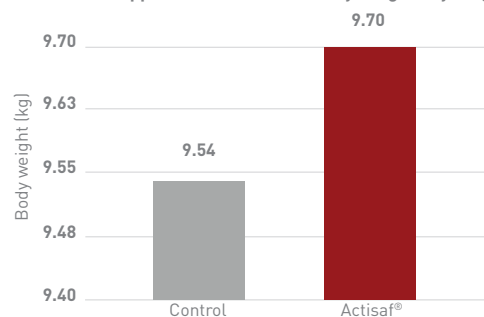
The gut is now recognized to be a key organ in human beings and in pets too. Gastrointestinal disorders can seriously affect puppy growth and senior wellbeing.

Phileo develops **Actisaf®**, a probiotic based on selected live yeast, which has recently proven to increase growth in young beagles and control fecal consistency, possibly by improving fiber digestibility, as well as reducing fecal *E. coli* counts (Stercova *et al.* 2016).

Effect of Actisaf® supplementation on fecal *E. coli* counts in young beagles



Effect of Actisaf® supplementation on the body weight of young beagles



Source: Stercova *et al.* 2016. Effects of live yeast dietary supplementation on nutrient digestibility and fecal microflora in beagle dogs. *J. Anim. Sci.* 2016. 94:2909-2918

PERSPECTIVES

While pet welfare will remain the focus of all Phileo's activity, a major R&D program has been set up to develop specific products backed up by scientific research. Collaboration with the Human Care division, the Lesaffre Puri Center for molecules characterization, and with universities will give rise to innovative solutions, tailor-made for the pet food industry.



Safmannan® production plant in Strasbourg (France)

RAISING LIFE



NOTHING IS MORE PRECIOUS THAN LIFE, AND THAT'S THE PHILOSOPHY THAT DRIVES PHILEO.

As pets are taking more and more place in our lives as family members, there are growing challenges to secure their daily well being and enhance their happiness.

Working at the crossroads of health and nutrition, we are committed to delivering future evidence-based solutions that insure an harmonious development and balanced feeding, and reinforce their resistance to diseases possibly leading to longer lifespan.

In each and every country, our team's progress is led by the most scientific outcomes as well as the field input of veterinarians and nutritionists.

phileo-lesaffre.com

