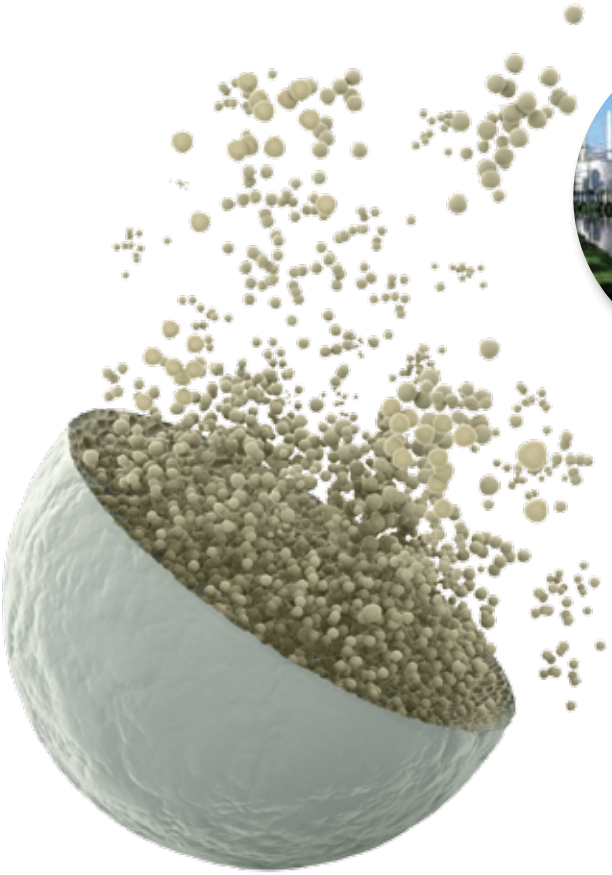
ActiSaf

- Live yeast concentrate
- Exclusive *Saccharomyces cerevisiae* Sc 47 strain
- High thermostability in pelleted feed: up to 92°C

Actisaf® is a thermostable live yeast concentrate, selected especially for animal nutrition for more than 30 years by Lesaffre research. The Lesaffre group is a reference in the field of yeast. Particularly well-known for our contributions to the bread-making, brewery and wine-making industries, we also specialize in human and animal nutrition and health care.

Working at the crossroads of nutrition and health, Phileo is committed to delivering innovative evidence-based solutions for improving ruminant health and performance. In every country, our progress is led by the most advanced science as well as practical on-farm experience. Phileo also has a platform in Toulouse, The Farm, dedicated to knowledge sharing and scientific expertise.



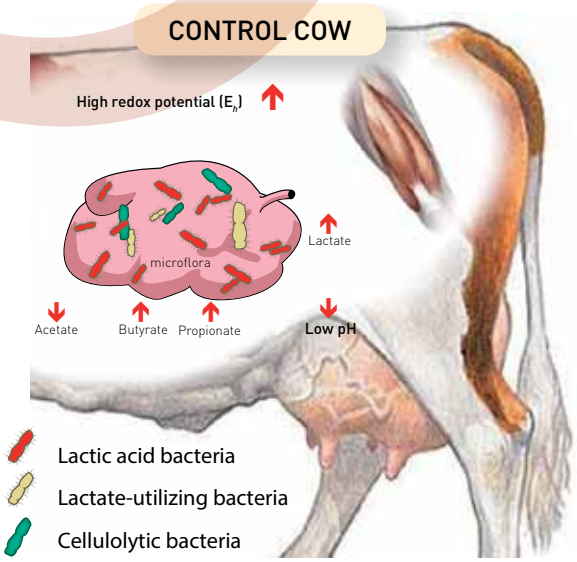
To guarantee optimum quality, the Sc 47 strain is carefully grown and transformed into microspherules in compliance with a patented process, in the world's largest yeast production factory, located in Marcq-en-Baroeul in northern France.

In Europe, Actisaf® is the live yeast authorized for the most species (cattle, small ruminants, pigs, horses and rabbits) and production stages, and it is covered by more than 11 registration dossiers.

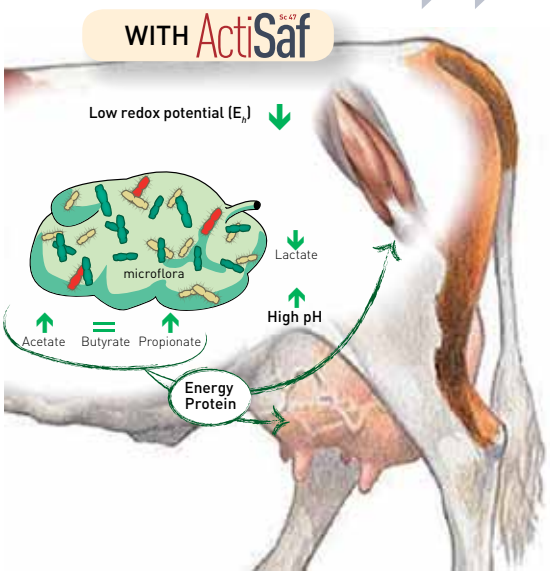
ActiSaf

3-STAGE MODE OF ACTION ON RUMEN FUNCTION

There is a close correlation between rumen pH and redox potential (E_h). The pH is used to evaluate rumen acidosis. The E_h reflects the activity and growth of rumen microbiota and varies according to the biochemical reactions taking place. The lower the E_h, the better the balance.



> 5 g of Actisaf® is sufficient to stabilize the 180 l rumen of a dairy cow.

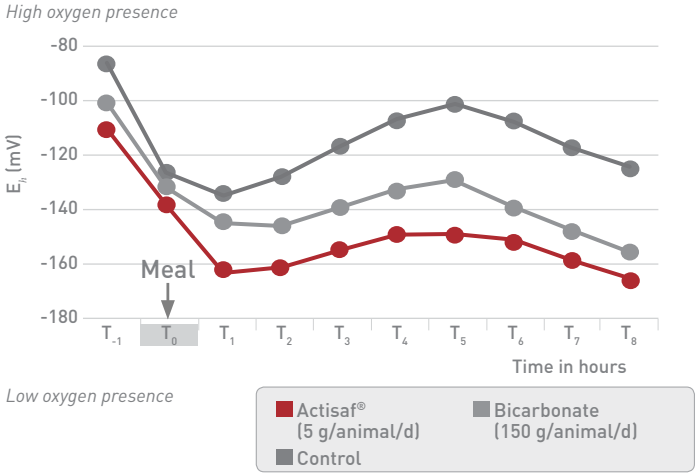


Scan this code to watch the video and find out more on rumen balance:

1 Redox E_h

Improving rumen reducing conditions[1]

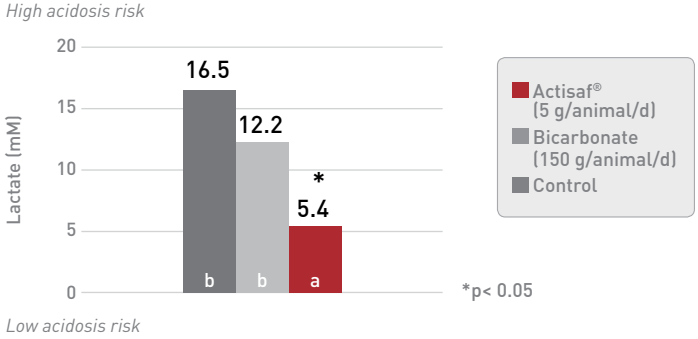
Actisaf® decreases the redox potential, thereby optimizing rumen function efficiency.



2 Flora

Stimulating fibrolytic and lactate-utilizing bacteria[1]

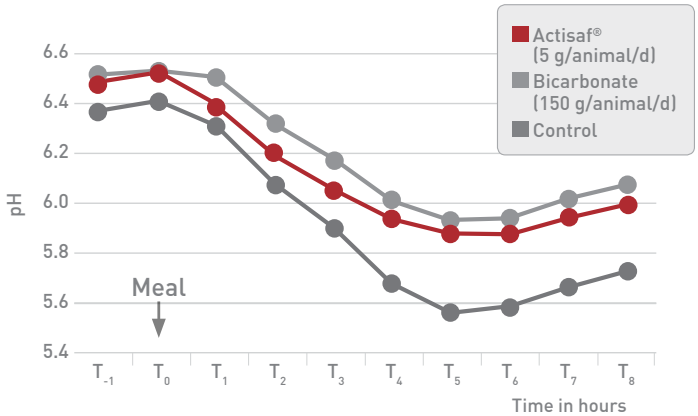
Supplementation with Actisaf® significantly reduces the amount of lactate in the rumen, leading to a significant increase in the pH.



3 pH

Increasing the pH to reduce the risk of acidosis[1]

Actisaf® acts on the flora balance, having an effect on pH equivalent to the buffer capacity of 150 g of bicarbonate.

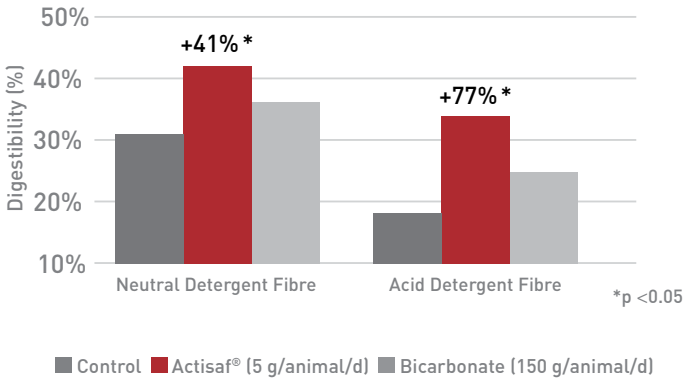


1- Marden et al. 2008. How does live yeast differ from sodium bicarbonate to stabilize ruminal pH. J Dairy Sci. 91: 3528-3535.

IMPROVING FEED DIGESTIBILITY AND HARMONIZING HERD PERFORMANCE

Assimilation of fibre[1]

Reducing the redox potential with Actisaf® stimulates fibrolytic bacteria for better feed digestibility.



Assimilation of feed

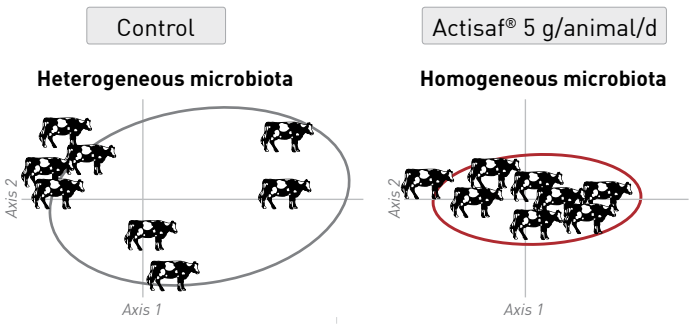
- fewer undigested particles in the dung (grains, fibre)
- more homogenous dungs

Control period

Period of Actisaf® use

Herd performance[2]

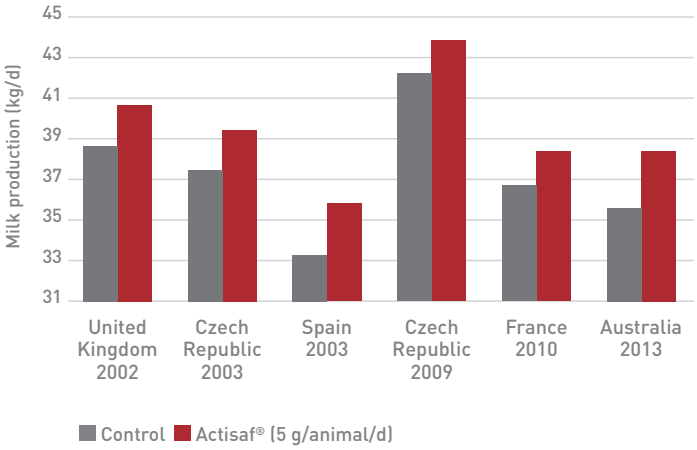
Actisaf® has a stabilizing effect on the rumen environment, significantly homogenizing rumen bacterial populations in the herd.



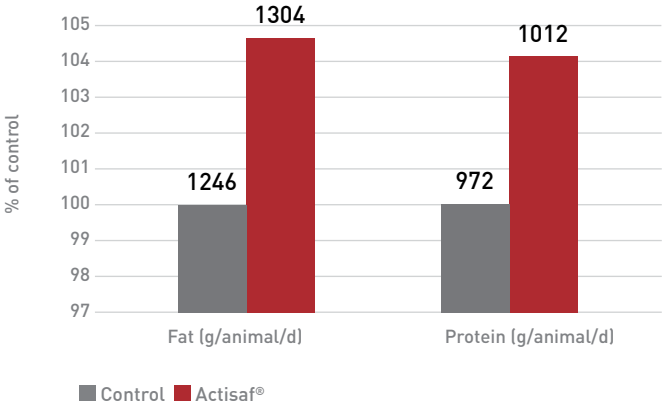
IMPROVING MILK PRODUCTION AND QUALITY

> Actisaf® increases milk production by 1.9 kg/d on average.

Milk production[3]

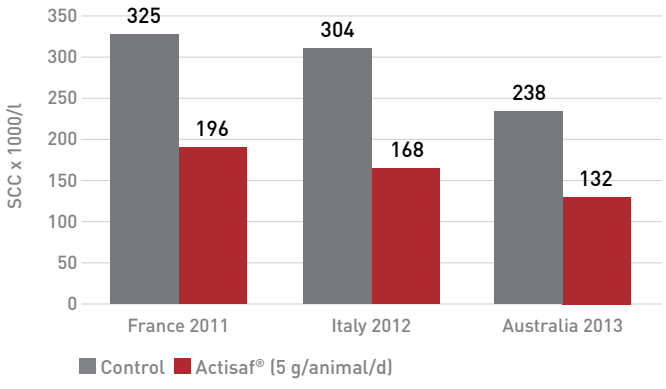


Nutritional concentration[4]



Milk quality[5]

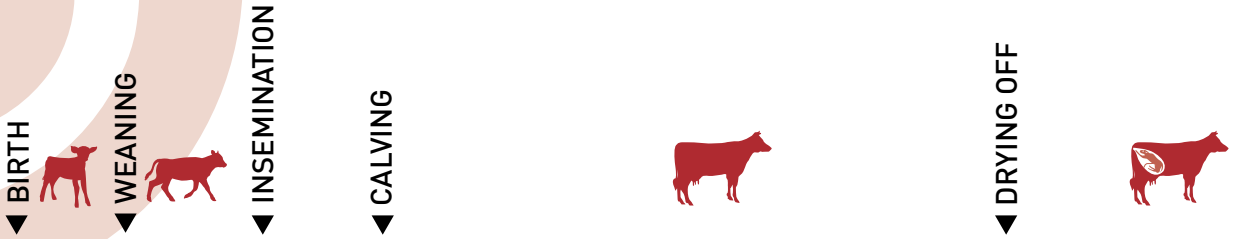
Improving and stabilizing the rumen function helps to improve animals' overall health status, resulting in lower cellular levels in milk.



2- Julien, C., Cauquil, L., Combes, S., Bouchez, O., Marden, JP., Bayourthe, C. 2012. Study of the effect of Live Yeast *Saccharomyces cerevisiae* (CNCM I-4407) on ruminal bacterial community in lactating dairy cows using 454 GS FLX pyrosequencing. 8th INRA-RRI symposium, 17-20 June 2012, Clermont-Ferrand, France. Principal Component Analysis based on the relative abundance of 177 identified genera.
3- Data on file.
4- European registration trials - 1 505 dairy cows.
5- Data on file.

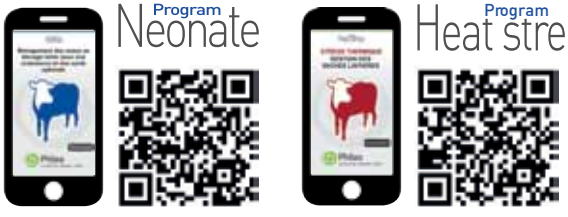
ActiSaf

BENEFITS FROM BIRTH TO LACTATION



	CALF → HEIFER	LACTATING COW	DRY COW (to prepare for calving)
DOSAGE	1 to 2 g/animal/d*	5 to 10 g/animal/d*	5 g/animal/d
MODES OF ACTION AND BENEFITS	• Developping rumen microflora • Establishing rumen function early on • Assisting growth	**Management of high-risk periods** Feed transition: • Stabilizing rumen microflora • Maintaining production Turnout and grazing: ↑ Assimilation of fibre ↑ Butterfat content Heat stress: ↑ Thermal comfort ↓ Impact of stress **Rumen balance and milk production** ↓ Risk of acidosis ↑ Feed efficiency ↑ Milk production and quality ↓ Somatic cells	↑ Passive immunity transfer from cow to calf
ZOO-TECHNICAL RESULTS	+18% ADG -15% FCR[6]	+1.9 kg of milk/cow/d +5 to 10% protein +5 to 10% fat[7]	+15% IgG in the colostrum[8] +39% calf serum IgG[9]

*Minimum European registration doses:
Calf: 0.5 g/animal/d
Dairy cow: 1 g/animal/d
1 g of Actisaf® = 10 billion CFU



Phileo developed its "Program Neonate" and "Program Heat Stress" smartphone apps to help dairy farmers evaluate the overall ROI of these programs. They take into consideration a farm's size and performance criteria.

6- European Actisaf® registration dossier for calves.
7- Comparative field trial summary. Data on file.
8- Marden et al. 2013. Impact of supplementing a yeast-based product during dry period in post-calving dairy cows. International Symposium, Prague.
9- Rodriguez Quiros, 2008. Effect of supplementing the feed of Holstein cows with live yeast (Actisaf®) on the concentration of IgG in the colostrum and the blood of new-born calves. Thesis.

137, rue Gabriel Péri – BP 3029
59703 Marcq-en-Baroeul - France
Tel.: +33 320 81 61 00 – Fax: +33 320 99 94 82

info@phileo.lesaffre.com

Phileo
LESAFFRE ANIMAL CARE

AC-FARM-doc.4p-17.01-EN.