Adopted: 13 March 2024

DOI: 10.2903/j.efsa.2024.8727

SCIENTIFIC OPINION

efsa JOURNAL

Efficacy of the feed additive consisting of *Saccharomyces cerevisiae* CNCM I-4407 (Actisaf® Sc47) for cattle for fattening (Lesaffre International)

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Abstract

Following a request from the European Commission, EFSA was asked to deliver a scientific opinion on the efficacy of *Saccharomyces cerevisiae* CNCM I-4407 (Actisaf® Sc47) as a zootechnical feed additive (functional group: gut flora stabiliser) in cattle for fattening. The additive is already authorised for use in feed for dairy cows, calves for rearing, lambs for fattening, dairy goats, dairy sheep and dairy buffaloes. In a previous opinion, the EFSA Scientific Panel on Additives and Products or Substances used in Animal Feed (FEEDAP Panel) concluded that Actisaf® Sc47 was safe for cattle for fattening, the consumers and the environment. Additionally, the Panel considered that Actisaf® Sc47 is not a skin irritant, and no conclusions could be drawn on the additive's eye irritancy and dermal sensitisation potential. Due to the lack of adequate data, the Panel could not conclude on the efficacy of the additive in cattle for fattening at the proposed conditions of use. In the current application, the applicant submitted three trials to support the efficacy in cattle for fattening. However, two of them were not considered for the assessment. The other trial showed an improved zootechnical performance of the animals at the proposed use level of 4×10^9 CFU/kg complete feed. Considering the additive is authorised in dairy cows and calves for rearing and the requirements of the current Guidance on the assessment of the efficacy of feed additives, no further demonstration of efficacy is necessary to extrapolate the conclusions previously reached to all ruminants. The significant positive effect shown in one trial in cattle for fattening supports the above extrapolation. Therefore, the FEEDAP Panel concludes that Actisaf® Sc47 is efficacious as a zootechnical additive for cattle for fattening at the proposed conditions of use.

KEYWORDS

Actisaf® Sc47, efficacy, gut flora stabiliser, *Saccharomyces cerevisiae* CNCM I-4407, zootechnical additives

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CONTENTS

1 | INTRODUCTION

1.1 | Background and Terms of Reference as provided by the requestor

Regulation (EC) No 1831/2003[1] establishes the rules governing the Community authorisation of additives for use in animal nutrition and, in particular, Article 9 defines the terms of the authorisation by the Commission.

The applicant, Phileo by Lesaffre,[2] is seeking a Community authorisation of *Saccharomyces cerevisiae* CNCM I-4407 (Actisaf® Sc47) as feed additive to be used as gut flora stabilisers for cattle for fattening (Table 1).

TABLE 1 Description of the substances.

Category of additive	Zootechnical additives
Functional group of additive	Gut flora stabilisers
Description	*Saccharomyces cerevisiae* CNCM I-4407
Target animal category	Cattle for fattening
Applicant	Phileo by Lesaffre
Type of request	New opinion

On 22 January 2019, the Panel on Additives and Products or Substances used in Animal Feed (FEEDAP) of the European Food Safety Authority (EFSA), in its opinion on the safety and efficacy of the product, could not conclude on the efficacy of the additive.

The Commission gave the possibility to the applicant to submit supplementary information and data to complete the assessment and to allow a revision of the EFSA's opinion. The new data have been received by the Commission on 26 May 2023.

In view of the above, the Commission asks the Authority to deliver a new opinion on *Saccharomyces cerevisiae* CNCM I-4407 as feed additives for cattle for fattening based on the additional data submitted by the applicant, in accordance with Article 29(1) (a) of Regulation (EC) No 178/2002.

1.2 | Additional information

The additive is currently authorised for use in feed for sows, piglets and dairy cows,[3] calves for rearing,[4] rabbits for fattening, non-food producing rabbits,[5] lambs for fattening, dairy goats, dairy sheep, dairy buffaloes, horses and pigs for fattening (4b1702).[6]

EFSA issued several opinions on the safety and efficacy of this additive (EFSA, 2006a, 2006b, 2006c, 2007a, 2007b, 2008, 2010; EFSA FEEDAP Panel, 2012, 2018a, 2018b, 2019, 2020).

2 | DATA AND METHODOLOGIES

2.1 | Data

The present assessment is based on the data submitted by the applicant in the form of a supplementary information[7] to a previous application on the same product.[8]

[1]Regulation (EC) No 1831/2003 of the European Parliament and of the council of 22 September 2003 on the additives for use in animal nutrition. OJ L 268, 18.10.2003, p. 29.

[2]Phileo by Lesaffre – S.I. Lesaffre–Division Phileo, 137 rue Gabriel Péri, 59,700 Marcq-en-Baroeul, France.

[3]Commission Implementing Regulation (EU) 2020/147 of 3 February 2020 concerning the authorisation of the preparation of *Saccharomyces cerevisiae* CNCM I-4407 as a feed additive for weaned piglets, sows (in order to have a benefit for suckling piglets) and dairy cows and amending Regulation (EC) No 2148/2004, (EC) No 1288/2004 and (EC) No 1811/2005 (holder of authorization S.I. Lesaffre). OJ L 31, 4.2.2020, p. 7.

[4]Commission implementing regulation (EU) 2021/367 of 1 March 2021 concerning the renewal of the authorisation of a preparation of *Saccharomyces cerevisiae* CNCM I-4407 as a feed additive for calves for rearing and repealing Regulation (EU) No 883/2010 (holder of authorisation S.I. Lesaffre). OJ L71, 2.3.2021, p. 1.

[5]Commission Implementing Regulation (EU) No 334/2012 of 19 April 2012 concerning the authorisation of a preparation of *Saccharomyces cerevisiae* CNCM I-4407 as a feed additive for rabbits for fattening and non-food-producing rabbits andamending Regulation (EC) No 600/2005 (holder of the authorisation Societe Industrielle Lesaffre). OJ L 108, 20.4.2012, p. 6–8.

[6]Commission Implementing Regulation (EC) No 2019/899 of 29 May 2019 concerning the renewal of the authorisation of *Saccharomyces cerevisiae* CNCM I-4407 as a feed additive for lambs for fattening, dairy goats, dairy sheep, dairy buffaloes, horses and pigs for fattening and repealing Regulations (EC) No 1447/2006, (EC) No 188/2007, (EC) No 232/2009, (EC) No186/2007 and (EC) No 209/2008 (holder of authorization S.I. Lesaffre). OJ L 144, 3.6.2019, p. 32.

[7]Dossier reference: EFSA-Q-2022-00860.

[8]Dossier reference: FAD-2010-0264.

In accordance with Article 38 of the Regulation (EC) No 178/2002[9] and taking into account the protection of confidential information and of personal data in accordance with Articles 39 to 39e of the same Regulation, and of the Decision of EFSA's Executive Director laying down practical arrangements concerning transparency and confidentiality,[10] a non-confidential version of the supplementary information has been published on Open EFSA.

2.2 | Methodologies

The approach followed by the FEEDAP Panel to assess the efficacy of *Saccharomyces cerevisiae* CNCM I-4407 (Actisaf® Sc47) is in line with the principles laid down in Regulation (EC) No 429/2008[11] and the relevant guidance documents: Guidance on the assessment of the efficacy of feed additives (EFSA FEEDAP Panel, 2018c).

3 | ASSESSMENT

The additive is a preparation consisting of dried cells of *Saccharomyces cerevisiae* CNCM I-4407 intended for use as a zootechnical additive (gut flora stabiliser) in feed for cattle for fattening at a minimum use level of 4.0×10^9 CFU/kg complete feed. The additive is currently authorised for use in calves for rearing at a minimum concentration of 1.5×10^9 CFU/kg complete feed and in dairy cows at a minimum concentration of 4.0×10^8 CFU/kg complete feed. The additive is also authorised for use in lambs for fattening, dairy goats, dairy sheep and dairy buffaloes.

In a previous opinion (EFSA FEEDAP Panel, 2019), the FEEDAP Panel concluded that the strain qualifies for the qualified presumption of safety approach. Since the additive is composed of the active agent only, Actisaf® Sc47 was also considered safe for target animals, consumers of products from treated animals and the environment. The additive is also not a skin irritant, but in the absence of data, no conclusions could be drawn on the eye irritancy and dermal sensitisation potential of the additive. In that opinion, the Panel could not conclude on the efficacy of the additive for cattle for fattening, due to the lack of sufficient evidence. The applicant has provided new efficacy studies which are assessed below.

3.1 | Efficacy

In a previous opinion, three studies were submitted aiming to demonstrate the efficacy of Actisaf® Sc47 on the growth performance of cattle for fattening (EFSA FEEDAP Panel, 2019). However, none could be further considered as evidence of the efficacy due to flaws in the experimental design: in two of the trials, there was a lack of statistical replicates for the evaluation of the zootechnical performance; in the third trial, the design prevented the estimation of the average feed intake and feed-to-gain ratio and the comparison between groups.

In the current application, the applicant submitted two trials in calves and three trials in cattle [redacted] support the efficacy of the additive in the target species.

The trials in calves[12] [redacted]. The Panel considered that the design of the trials was not compliant with the standard production cycle of 'cattle for fattening' reared in Europe, according to the definition of the category established in the Regulation (EC) No 429/2008.[13] Therefore, none of the studies in calves were considered further in the assessment of the efficacy of the additive.

Regarding the studies in cattle for fattening, [redacted],[14] [redacted]). These rates would prevent to extrapolate the results of the trial to a general healthy population. Moreover, in another trial,[15] only the concentrate intake was measured (i.e. straw consumed by the cattle was not recorded), which did not allow to get the total dry matter intake for this trial. Therefore, these two trials in cattle for fattening were not considered further in the assessment of the efficacy of the additive.

The applicant also submitted a meta-analysis of the three studies in cattle for fattening[16] and another meta-analysis of all five studies, including the ones with calves and with cattle for fattening.[17] Considering that all the trials involving calves

[9]Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. OJ L 31, 1.2.2002, p. 1–48.

[10]Decision https://www.efsa.europa.eu/en/corporate-pubs/transparency-regulation-practical-arrangements

[11]Commission Regulation (EC) No 429/2008 of 25 April 2008 on detailed rules for the implementation of Regulation (EC) No 1831/2003 of the European Parliament and of the Council as regards the preparation and the presentation of applications and the assessment and the authorisation of feed additives. OJ L 133, 22.5.2008, p. 1.

[12]Technical dossier/Study_E and Study_F.

[13]Commission Regulation (EC) No 429/2008 of 25 April 2008 on detailed rules for the implementation of Regulation (EC) No 1831/2003 of the European Parliament and of the Council as regards the preparation and the presentation of applications and the assessment and the authorisation of feed additives.

[14]Technical dossier/Study_A.

[15]Technical dossier/Study_C.

[16]Technical dossier/Study_D.

[17]Technical dossier/Study_G.

and two of the trials in cattle for fattening could not be further considered, the two meta-analyses were not considered adequate to support the efficacy of the additive.

In the third trial in cattle for fattening,[18] [redacted][19] [redacted]. The results are shown in Table 2.

TABLE 2 Effects of Actisaf Sc47 on the zootechnical performance of cattle for fattening.

Groups (CFU/kg complete feed)	Daily DM intake* (kg)	Initial body weight (kg)	Final body weight (kg)	Average daily weight gain (kg)	Feed-to-gain ratio**	Mortality and culling (%)
0	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4×10^9	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Abbreviations: CFU, colony forming unit; DM, dry matter.

[a,b]Mean values within a trial and within a column with a different superscript are significantly different $p<0.10$.

*DM intake includes both milk replacer and solid feed. **Feed-to-gain ratio calculated as (average daily weight gain/DM intake).

[redacted]. The bulls receiving the additive at 4.0×10^9 CFU/kg feed showed better performance (higher final body weight, average daily gain, and feed-to-gain ratio) than the control group.

3.1.1 | Conclusions on efficacy

Considering the authorisation of the additive in dairy cows and calves for rearing, and the requirements of the current Guidance on the assessment of the efficacy of feed additives, no further demonstration of efficacy is necessary to extrapolate the conclusions previously reached to all ruminants (EFSA FEEDAP Panel, 2018c). In the current application, one study showed a better zootechnical performance of cattle for fattening when the additive was supplemented at 4×10^9 CFU/kg complete feed, supporting the above extrapolation. Therefore, the FEEDAP Panel concludes that Actisaf® Sc47 is efficacious as a zootechnical additive for cattle for fattening at the proposed conditions of use.

3.2 | Post-market monitoring

The FEEDAP Panel considers that there is no need for specific requirements for a post-market monitoring plan other than those established in the Feed Hygiene Regulation[20] and Good Manufacturing Practice.

4 | CONCLUSIONS

The FEEDAP Panel concludes that Actisaf® Sc47 is efficacious as a zootechnical additive for cattle for fattening at the proposed conditions of use.

ABBREVIATIONS

CFU	colony forming unit
CNCM	collection nationale de cultures de microorganismes
DM	dry matter

[18]Technical dossier/Study_B.

[19]CFU/kg TMR: [redacted] for supplemented group.

[20]Regulation (EC) No 183/2005 of the European Parliament and of the Council of 12 January 2005 laying down requirements for feed hygiene. OJ L 35, 8.2.2005, p. 1.

FEEDAP	EFSA Scientific Panel on Additives and Products or Substances used in Animal Feed
TMR	total mixed ration

ACKNOWLEDGEMENTS
The Panel wishes to thank for the support provided to this scientific output to Jaume Galobart.

CONFLICT OF INTEREST
If you wish to access the declaration of interests of any expert contributing to an EFSA scientific assessment, please contact interestmanagement@efsa.europa.eu.

REQUESTOR
European Commission

QUESTION NUMBER
EFSA-Q-2022-00860

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How to cite this article: EFSA FEEDAP Panel (EFSA Panel on Additives and Products or Substances used in Animal Feed), Bampidis, V., Azimonti, G., Bastos, M. L., Christensen, H., Durjava, M., Dusemund, B., Kouba, M., López-Alonso, M., López Puente, S., Marcon, F., Mayo, B., Pechová, A., Petkova, M., Ramos, F., Villa, R. E., Woutersen, R., Anguita, M., Fruk, S., Innocenti, M., & Ortuño, J. (2024). Efficacy of the feed additive consisting of *Saccharomyces cerevisiae* CNCM I-4407 (Actisaf® Sc47) for cattle for fattening (Lesaffre International). *EFSA Journal*, *22*(4), e8727. https://doi.org/10.2903/j.efsa.2024.8727