

SCIENTIFIC OPINION

Scientific Opinion on the safety and efficacy of vitamin A (retinyl acetate, retinyl palmitate and retinyl propionate) as a feed additive for all animal species and categories¹

EFSA Panel on Additives and Products or Substances used in Animal Feed (FEEDAP)^{2,3}

European Food Safety Authority (EFSA), Parma, Italy

The full opinion will be published in accordance with Article 8(6) of Regulation (EC) No 1831/2003 once the decision on confidentiality, in line with Article 18(2) of the Regulation, will be received from the European Commission.

SUMMARY

Following a request from the European Commission, the Panel on Additives and Products or Substances used in Animal Feed (FEEDAP) was asked to deliver a scientific opinion on the safety and efficacy of vitamin A (retinyl acetate, retinyl palmitate and retinyl propionate) as an additive to feed and water for drinking for all animal species.

Vitamin A is essential for vision, growth differentiation and proliferation of a wide range of epithelial tissues, bone growth, reproduction and embryonic development.

The tolerance data for the target species do not indicate a concern for animal safety considering the maximum values set in EU regulation for food producing animals, and also for pets.

All consumer exposure calculations showed that liver is the only food of animal origin of which the consumption poses a risk to the adult consumers. This risk can be considerably reduced, however not eliminated, if the new levels proposed by EFSA for a reduction of the maximum vitamin A content in feedingstuffs would be respected. These proposals are:

Pigs: piglets (weaned or suckling): 16 000 IU/kg complete feed, pigs for fattening: 6 500 IU/kg complete feed and sows: 12 000 IU/kg complete feed.

Poultry: chickens (including all minor poultry species) in the first 14 days of life and turkeys in the first 28 days of life: 20 000 IU/kg complete feed. All poultry (for fattening, reared for laying, laying and breeding): 10 000 IU/kg complete feed.

¹ On request from the European Commission, Question No EFSA-Q-2010-01294, adopted on 12 December 2012.

² Panel members: Gabriele Aquilina, Alex Bach, Vasileios Bampidis, Maria De Lourdes Bastos, Gerhard Flachowsky, Josep Gasà-Gasó, Mikolaj Antoni Gralak, Christer Hogstrand, Lubomir Leng, Secundino López-Puente, Giovanna Martelli, Baltasar Mayo, Derek Renshaw, Guido Rychen, Maria Saarela, Kristen Sejrnsen, Patrick Van Beelen, Robert John Wallace and Johannes Westendorf. Correspondence: FEEDAP@efsa.europa.eu

³ Acknowledgement: The Panel wishes to thank the members of the Working Group on Fat-soluble Vitamins, including Georges Bories, Jürgen Gropp, Alberto Mantovani and the late Reinhard Kroker, for the preparatory work on this scientific opinion.

Suggested citation: EFSA Panel on Additives and Products or Substances used in Animal Feed (FEEDAP); Scientific Opinion on the safety and efficacy of vitamin A (retinyl acetate, retinyl palmitate and retinyl propionate) as a feed additive for all animal species and categories. EFSA Journal 2013;11(1):3037. [2 pp.] doi:10.2903/j.efsa.2013.3037. Available online: www.efsa.europa.eu/efsajournal

Milk replacers for all mammalian species: 25 000 IU/kg milk replacer.

Calves for rearing in the first four months of life, lambs and kids for rearing in the first two months of life: 16 000 IU/kg complete feed. Cattle, sheep and goats for fattening: 10 000 IU/kg complete feed.

Dairy cows: 200 000 IU vitamin A/cow per day.

Rabbits, horses, salmonids and pets: no maximum content is proposed.

The availability of an additional route of administration of vitamin A (e.g., water for drinking) would increase the risk for the consumer.

Retinyl acetate, retinyl palmitate and retinyl propionate are irritants to skin and potential skin sensitizers. Data on respiratory toxicity and on the levels of exposure of workers which would cause systemic or respiratory toxicity are not available. However, inhalation exposure of workers from handling certain formulations is likely. The FEEDAP Panel recommends that protection measures of persons handling the additive against the inhalation exposure should be taken.

The use of vitamin A in animal nutrition up to the maximum contents authorised does not pose a risk to the environment.

Retinyl acetate, retinyl palmitate and retinyl propionate are regarded as effective sources of vitamin A.