

**REPORT OF THE SCIENTIFIC COMMITTEE FOR ANIMAL NUTRITION
ON THE SAFETY OF USE OF ETHOXYQUIN
IN FEEDINGSTUFFS FOR DOGS**
(Opinion Expressed: 15 January 1993)

TERMS OF REFERENCE (7 JULY 1992):

The SCAN is requested to examine the accompanying information (see under references) and express its opinion about the safety of use of ethoxyquin in feedingstuffs for dogs.

OPINION OF THE SCAN:

The Committee has examined carefully the documentation provided by the Commission (see references) in regard to the safety in use of ethoxyquin (ETQ) in feedingstuffs for dogs. The committee considers that, with the limited and old data available, in view of the conclusion of the Scientific Committee for Food that no toxicological evidence exists to oppose the use of ETQ on apples and pears at a residue limit up to 3 mg/kg, and taking into account that this product has been in use for more than 30 years, there is no urgency in issuing a final opinion on the safety of use of ethoxyquin in compound feedingstuffs for dogs.

ETQ is a synthetic antioxidant included in many types of animal feeds to inhibit the degradation of e.g. polyunsaturated fatty acids, vitamins A and E and so maintains the nutritional quality of the feed for a longer time. This use has extended over 30 years with FDA and EC approval up to a maximum inclusion of 150 mg/kg feed. Despite this long history and an exposure to various species including man, virtually all accounts of its possible involvement in adverse effects have been in the case of dry diets fed to dogs since 1988.

However, among dogs there is no correlation with age, sex or breed and the claimed adverse reactions include liver, kidney, thyroid and reproductive dysfunction, teratogenicity, carcinogenicity, allergy and various skin and hair abnormalities. Analytically unsubstantiated claims of improvement on possibly ETQ-free diets exist.

Recognising that the studies which support the 150 ppm maximal inclusion concentration are old and that the sparse open literature evaluation of ETQ in rodents includes reports of inhibition or promotion of the carcinogenic potential of other agents, further studies are planned or are in progress, both by the manufacturers and under the National Toxicology Program (NTP) of the USA. The Committee recommends that it should assess the results of these studies before issuing an opinion on the safety of ETQ for dogs.

References:

ANONYM. Literature review on Ethoxyquin toxicology (Submitted by the DE delegation, 29 references).

ANONYM. More information on ethoxyquin in pet food (Memorandum of the Canadian Veterinary Medical Association, 9 November, 1990).

ANONYM. Antioxidants. Memorandum from Waltham Centre for Pet Nutrition (14 June 1991).

ANONYM. FDA Dog Study seen resolving BHA problem (Reprint from Food Chemical News, 29 July 1985 p.30)

ANONYM. BHA Report concludes no carcinogenic risk in humans: AHF (Reprint from Food Chemical News, 4 February 1991 p.30).

ANONYM. Research protocol on chronic toxicity/reproduction study in dogs with ethoxyquin (confidential information provided by Monsanto).

ANONYM. Progress report : Interim status for chronic toxicity/reproduction dog study. (confidential information provided by Monsanto).

CLASSEN H.G., ELIAS P.S., HAMMES W.P and SCHMIDT, E., 1987. Toxikologisch-hygienische Beurteilung von Lebensmittelinhalts- und -Zusatzstoffen sowie bedenklicher Verunreinigungen (pp: 132-137).

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WILSON R.H. and DEEDS F. 1959. Toxic Studies on the Antioxidant 6-Ethoxy-1,2-dihydro-2,2,4-trimethylquinoline. J. Agric. Food Chem., 7: 203-206.

WILSON R.H., THOMAS J.O., THOMPSON C.R., LAUNER H.F. & KOHLER G.O. 1959. Absorption, Metabolism, and Excretion of the Antioxidant, 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline. J. Agric. Food and Chem., 7: 206-209.