



COMMITTEE FOR VETERINARY MEDICINAL PRODUCTS

LACTIC ACID

SUMMARY REPORT

Lactic acid (2-hydroxypropanoic acid) is a normal intermediary metabolite in humans. It is oxidised through pyruvate (in the cytoplasm) to carbon dioxide and water in the tricarboxylic acid cycle (in the mitochondria).

It also occurs naturally in several foods (apples and other fruits, tomato juice, beer, wines), in several higher plants, as a result of bacterial action, e.g. in milk due to an action on lactose, and in molasses due to conversion of sugars.

It has been used therapeutically as a topical antimicrobial agent (e.g. in teat dips), as a source of bicarbonate for the correction of metabolic acidosis, as a caustic agent, and as an intestinal antiseptic and anti-ferment agent.

It is also used as a pharmaceutical excipient and for various purposes in food processing (pH control, solvent, vehicle, food preservative, flavouring and flavour enhancement, curing, and pickling). It has been categorised as Generally Regarded as Safe (GRAS) for use without limitation (other than current good manufacturing practice) as a ingredient in food (except for infant food), by the USA FDA in 1984.

JECFA discussed lactic acid at its 17th meeting (1974) and considered it was unnecessary to establish an ADI for it. However, there was some evidence that neonates have difficulty in utilising the D(-) isomer of lactic acid, and therefore it was felt that neither this nor the racemate should be used in foods for infants less than 3 months old, and that further studies on the metabolism of D(-) lactic acid in infants were necessary.

However the amounts present as residues from veterinary use are likely to be extremely low in comparison to naturally occurring residues in meat, and from bacterial fermentation of lactose in milk (0.14 % occurs naturally, 0.3 % causes a sour taste in milk), and therefore unlikely to present an additional hazard.

Consequently, it is recommended that an MRL is not required for lactic acid and that it should be entered into Annex II of Regulation 2377/90/EEC.