# LOSS OF L-ASCORBIC ACID IN COMMERCIAL DRINKING MILK CAUSED BY MILK PROCESSING AND STORAGE TIMES

Nannapat Nalame, Wasana Chaisri and Witaya Suriyasathaporn

Ruminant Clinic, Faculty of Veterinary Medicine, Chiang Mai University, Chiang Mai, Thailand

**Abstract.** The goals of this study were to determine L-ascorbic acid concentrations in various milk products, and to evaluate the effect of storage time on L-ascorbic acid in milk. Commercial plain milk samples were obtained from either a raw-food market or a supermarket, in Mae Hia, Mueang District, Chiang Mai Province, Thailand, during July, 2008. The types of milk were separated based on fat percentages (non fat-0%, low fat-1.5%, full fat-3%), and their method of processing (pasteurization, UHT). All samples were collected, transported, and measured for their L-ascorbic acid concentrations on the same day. The expiration date, type of milk, and source of milk were recorded. Pasteurized milk had higher L-ascorbic acid levels than UHT milk ($p<0.05$), but no differences of L-ascorbic acid levels were seen among the milk fat percentage groups. The L-ascorbic acid level was significantly positively related to time before the expiration date of the milk, indicating that increased storage time of milk is related to decreased L-ascorbic acid concentration in the milk. Longer milk storage times resulted in lower- L-ascorbic acid levels and pasteurized milk has higher L-ascorbic acid levels than UHT milk.

Correspondence: Witaya Suriyasathaporn, Faculty of Veterinary Medicine, Chiang Mai University, Chiang Mai, 50100, Thailand.
Tel: 66 (0) 5394 8023, Fax: 66 (0) 5327 4710
E-mail: suriyasathaporn@hotmail.com