

DIFFERENCES IN THE CONCENTRATION OF VITAMINS A AND E, BETWEEN MILK AND FODDER CONCENTRATE FROM REGION OF TETOVO, MACEDONIA

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Abstract

Vitamins A and E in have oxidative effects on the health of dairy cows, as well as on the milk production. Hence the main goal of this study was to determine the content of vitamins A and E in animal feed - concentrate and raw and pasteurized and packaged raw cow milk from the region of Tetovo, Macedonia.

Analyzed were samples of feed, raw, and packaged raw cow milk. High performance liquid chromatography (HPLC) was applied for analysis of the vitamins with extraction methodology - on Perkin Elmer, pump: 200LC series, self-sample; ISS - 200, detector LC - 135 / LC -235 C DA. For determination of the gained data for concentration of vitamins A and E in feed and milk ANOVA statistical analysis was used.

It was determined that the vitamins A and E concentrations in the feed concentrate from the region of Tetovo were 26.21 mcg/100g and 26.234 mcg/kg, respectively. As for the amount of vitamin A determined packaged raw cow milk it was 35.82 mcg/100g, and the amount of vitamin E was 0.87 mcg/100g. A significant statistical difference was found among the values of vitamins A and E in milk ($p < 0.001$).

In conclusion could be stated that the concentrations of vitamins A and E determined in the concentrates and the packaged raw milk were low compared to those found in the packaged raw milk standard samples.

Key words: *Fodder, Fodder concentrate, Vitamin A, Vitamin E.*