

D- AND L- LACTIC ACID ANALYSIS IN URINE AND MILK OF COWS BEFORE AND AFTER CALVING

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Summary. The aim of our experiment was to determine excretion of D- and L- lactic acid via milk and urine of cows before and after calving. Three cows were examined during 6 weeks. Cows were fed the ration balanced according to their physiological requirements. Time of the beginning of adaptation to concentrates differed among cows: the cow underwent slow adaptation (17 days before calving), two cows - fast adaptation (2 and 4 days before calving) periods. Urine samples were taken 1, 2, 7, 14, 21 days before and after calving and on the day of calving. Milk samples were taken 2, 7, 14, 21 days after calving. All samples were taken in the afternoon 2 hours after feeding. D- and L-lactic acid isomers were determined by enzymatic bioanalysis. It was determined that the excretion of D- and L-lactic acid via urine is not affected by the adaptation to concentrates. In order to determine if the increase of concentrates has the influence on excretion of lactic acid isomers via milk, a larger number of experiments is required.

Keywords: cow, lactic acid, urine, milk