



Evaluation of some biochemical indices in "milk whey" for diagnosis of subclinical mastitis caused by some *Enterobacteriaceae* family

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Abstract

A total of 310 milk samples collected from the udder halves of 161 dairy ewes at mid period of lactation. This study designed to evaluate the variation in milk "California

mastitis test" (CMT), "white side test" (WST), chloride test and pH test, in relation to some *Enterobacteriaceae* family infection. The activities of whey "lactate dehydrogenase" (LDH), "alkaline phosphatase" (ALP) and "aspartate aminotransferase" (AST) were also estimated. The percentage of infection with subclinical mastitis caused by *Proteus mirabilis* and *E. coli* mastitis was 8.88% and 3.33% respectively. All samples were subjected to bacteriological examination. The whey samples were divided into three groups: normal animals (non-infected group), subclinical infected group with *Proteus mirabilis* and subclinical infected group with *E. coli* for estimation of enzymes. Activities of "LDH" "ALP" and "AST" were significantly higher in milk from the subclinical mastitis groups for *Proteus mirabilis* and *E. coli* (AST: 270.33±93.54; 268.25±114.37; ALP: 789.03±123.95; 838.12±92.50; LDH: 316.83±32.02; 407.12±38.82) respectively, than in non-infected group (AST: 38.84±2.71; ALP: 187.91±5.54; LDH: 142.59± 5.67). In conclusions, the measurement of AST, LDH and ALP activities in milk samples can be used as appropriateness and dependable method for detection of subclinical mastitis in ewes.

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