



Alteration of some enzymatic activities in whey of ewe's milk Suffered from Staphylococcal mastitis

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Abstract

The present experiment was conducted to study variation in milk California mastitis test (CMT) white side test (WST) and chloride test, pH test, along with activities of whey enzymes lactate dehydrogenase (LDH), alkaline phosphatase (ALP) and aspartate aminotransferase (AST) in

relation to staphylococcal mastitis in lactating ewes. A total of 310 milk samples were collected from the udder halves of 161 dairy ewes at mid period of lactation to determine the percentage of Staphylococcus mastitis. The overall percentage of infection with clinical and subclinical Staphylococcal mastitis was found to be 2.25 % and 12.22% respectively. All samples were subjected to bacteriological examination and the following staphylococcal species were isolated, coagulase negative Staphylococcus (1.29% & 27.8%) and Staphylococcus aureus (27.8% & 12.22%) from clinical and subclinical mastitis respectively. The whey samples were divided into three groups: a non-infected group, subclinical infected group and clinical infected group for estimation of enzymes. Activities of LDH, ALP and AST were significantly higher in milk from the subclinical and clinical mastitis groups for S. aureus and coagulase negative Staphylococcus (CNS) (AST: 222.09±31.54; 194±27.15 & 271.82±30.50; 201.0±49.51; ALP: 837.08±63.57; 866.01±215.36 & 884.22±26.08 ; 807.45±47.05 LDH: 332.95±5.67 & 289.83±32.95; 344.2 ±21.17 ; 307.62±72.77) respectively, than in non-infected group (AST: 38.84±2.71; ALP: 187.91±5.54; LDH: 142.59± 5.67).

In conclusions, the results of the present study showed that the measurement of AST, LDH and ALP activities in milk samples could be used as reliable method and suitable for detection of ovine subclinical mastitis.

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