

Alteration in Chemical Composition of Camel Colostrum and Blood Sera During Colostral Period

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ABSTRACT

The present study was carried out at Tamboul Camel Research Centre. Four she camels at their second parity were selected from the herd, the aims of this study to investigated the compositional quality of camel colostrum and blood sera from parturition and up to nine consecutive days postpartum. Duplicate samples of colostrum and blood sera from each of the experimental animals were collected at 8, 24, 48, 56, 72, 96, 104, 120, 144, 152, 168, 192, 200 and 216 hours postpartum. The fat component recorded zero level in three of the four tested animal's colostrum at 8 hours postpartum. In animal one only, the colostrum contained 2.2% fat that declined to 0.65 % and further dropped to 0.0 % in the 24 and 48 hours collection period respectively. The other tested components including solids non-fat (SNF), lactose, protein, and total solids (TS) started at high levels and then decreased progressively also with no consistent pattern towards the end of the colostral period. The colostrum of the first animal maintained the lowest value in fat % throughout the collection period. Differences however did not maintain statistical significance ($P < 0.05$). The colostrum of the second animal recorded significant ($P < 0.05$), higher values of SNF than the other three animals. The first animal on the other hand recorded the highest values ($P < 0.05$) in lactose, protein and TS component compared to the other three animals thus emphasising the effect of individuality of the animal. On the other hand changes in blood sera during the nine days postpartum showed great individual variability in cholesterol, total protein, albumin, globulin, calcium and phosphorus.

The samples collected 168 hrs postpartum contained a significantly less ($P < 0.05$) albumin than all the others.

Keywords: chemical composition, colostrum, camels, blood sera.