

## **PHYSIOLOGY & REPRODUCTION**

### **MINERAL CONCENTRATION IN MILK OF LIBYAN BARBARY SHEEP**

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#### **ABSTRACT**

The experiment was carried out at the sheep Research Station of University of Alfateh near Tripoli .Thirty ewes were chosen at random from the flock during the lambing season and hand milked at weekly interval during lactation .

On the test day, lambs were separated from their mothers 12 hours before milking, samples were collected for chemical analysis that included the major constituents (protein, fat, water and lactose ) & minerals (sodium, potassium, calcium, magnesium, phosphorus and Iron).

The average values of milk constituents were 5.9, 5.3, 5.6 & 83.6% for fat, protein, lactose & water, respectively. The percentage of total solids in libyan sheep milk was 16.8%.

The concentration of minerals in milk were 51.4 mg/100g for sodium, 119.3 mg/100g for potassium, 56 mg/100g for calcium, 19.3 mg/100g for magnesium, 129.2 mg/100g for phosphorous and 0.79 mg /100g for Iron during the lactation season .

Age of ewes, sex of lambs & type of birth of the ewe were factors considered affecting milk constituents & minerals.

Type of birth of the lambs was not included because all lambs were single born. The results show that 4 years old ewe were the highest in phosphorus concentration while the 6 year old ewes were higher in sodium, potassium & iron. The 5 years old ewes were higher in calcium concentration. Single born ewes were higher in calcium & phosphorus concentration as compared to twin born ewes. Twin born ewes were higher in sodium, potassium, magnesium, & iron concentrations.

The results have also showed that ewes with male lambs had higher sodium, potassium, calcium & magnesium concentrations. The ewes with female lambs were higher in phosphorous concentration as compared to ewes with male lambs.

