The Effect of Frozen Storage on the Microbiological and Biochemical Status of Camel (*Camelus dromedarius*) Meat

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ABSTRACT

This study was performed to evaluate the effect of frozen storage on microbial load, and biochemical characteristics of camel meat. Fifteen samples were collected from longissimus muscles (three replicates) of different camels slaughtered at Al Salam slaughter house in Khartoum estate west Omdurman. Measurement of pH, water holding capacity (WHC), total volatile nitrogen (TVN), peroxide value, acid value, and microbial analysis was done on meat samples. Meat samples were frozen for 1, 2, 4, 6 and 8 weeks at -18 °C and undergone the microbial and biochemical analysis. . On day 0, the Mean bacterial loads and *Coliform* counts of meat were 6×10^3 and 5×10^3CFU/g respectively. On 8th week the mean bacterial loads and *Coliform* counts stored at -18°C were $4\times10^2$and 3.5×10^2CFU/g respectively. Types of the bacteria isolated were *staphylococcus aureus, E.coli, Citrobacter, Salmonella, Enterobacter aerogenes, klebsiela, pseudomonas aeruginosa and Proteus spp.* With percentage rate 12%, 11%, 15%, 1%, 16%, 12%, 5% and 15% respectively. The study indicated that the freezing storage increased the water holding capacity, total volatile nitrogen (TVN), acid value and pH significantly ($p<0.05$). The peroxide value is not affected by freezing storage time. In summary the study showed that the storage time at -18°C effects on the microbial and biochemical status of camel meat.

Key words: Camel, Microbiological, Biochemical, Stored Meat