

Effect of Antimicrobial Characteristics of Pepper Fruits on Some Spoilage Organism of Fessiekh Products

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The present study conducted to evaluate the effect of antimicrobial characteristics of hot and sweet pepper on some spoilage organisms of Fessiekh (local Sudanese fermented salted fish (*Hydrocynus spp*)) products. The crude Fessiekh was treated with pepper fruits as dried powder of two types of pepper (fruit-1 *Capsicum anunum* – sweet pepper, fruit -2 *Capsicum frutescens* – hot pepper) as natural conserved material. The chemical composition of crude and treated Fessiekh were significantly different with ($P < 0.01$) in moisture, ($P < 0.05$) in ash and pH, and had no significant differences in both protein and fat. The total viable counts in the first four days after adding of pepper fruits were decreased and showed high significant differences ($P < 0.01$) between the two types of pepper fruits and the hot one was the most effective on the total viable counts which decreased from $43.4 \times 10^3 \pm 1.3 \times 10^3$ at first day to $4.5 \times 10^3 \pm 1 \times 10^3$ after 96 hr, the *Staph spp* test showed positive results with counts 7.6×10^3 for crude, and 21.9×10^3 for sweet pepper treated Fessiekh and negative for hot pepper treated Fessiekh. The *Listeria spp.* test was positive for Fessiekh treated and negative for crude Fessiekh samples, while the *Staphylococcus aureus* and *Listeria monocytogens* had no effects on all samples.

The study conclude that the addition of pepper fruits either sweet or hot will affect the microbial load by reduced it and raise the quality of Fessiekh products in Sudan.

Key words: Fessiekh, salted fish, *Hydrocynus spp.*, quality, pepper, antimicrobial.

Biography:

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