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Research Paper

Effect of Drying System on Chemical and Physical Attributes of Dried Catfish Meat (*Clarias* Sp.)

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ABSTRACT

The aim of this study was to identify the effect of drying system on quality and physical characteristics (chemical proximate and sensory analysis) of dried fish (Cat fish, *Clariassp*) flesh. Three drying methods were used in this study: open air and solar tents comprising the plastic sheet and rabbit wire net. Before drying, the slices of fish flesh were prepared and soaked in 25% salt solution for 1 hour. The results of chemical composition parameters moisture, protein, fat, and ash content of the studied samples were found to be 4.55-5.95%, 52.65-61.75%, 6.8-7.95%, and 8.1-8.85%, respectively. The findings of this study revealed no significantly differences in moisture, dry matter and ash among the studied samples, but the protein and fat contents levels showed significant difference. Sensory evaluation attributes

showed no significant difference among the studied fish. The color values of the open air, plastic sheet and rabbit wire net samples were found to be 6.17, 6.67, and 6.67 respectively. Texture values of dried fish meat recorded 6.33 for rabbit wire net followed by 6.17 for plastic sheet tent and 5.58 for open air drying method. Flavour values scores were 6.58 for plastic sheet, 5.58 for rabbit wire net and 5.42 for open air drying system. Juiciness results were 4.33 for rabbit wire net, 4.25 for open air and 4.17 for plastic sheet. There was no significant difference for sensory evaluation characteristics. It could be concluded the best drying method for the fish (*Clariassp*) meat is plastic sheet tent system, which gave the best results among the three studied drying methods.

Keywords: Drying system, chemical, physical, attributes, catfish, fish meat

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Research Paper

Effect of Antimicrobial Properties of Pepper Fruits on Some Spoilage Organism of Sudanese Wet-Salted Fermented Fish (Fassiekh) Product

Adam Sulieman HM and Allaahmed AAA.

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ABSTRACT

This study was conducted to evaluate the effect of antimicrobial characteristics of hot and sweet pepper on some spoilage organisms of Fassiekh (wet-salted fermented fish) products. The crude Fassiekh (*Hydrocynus* spp) was treated with pepper fruits (fruit-1 *Capsicum annuum* -sweet pepper, fruit-2 *Capsicum frutescens* -hot pepper) as natural conserving materials. The chemical composition of crude and treated Fassiekh were quite significantly different ($p < 0.001$) 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 pepper fruit addition were decreased and showed high significant differences ($p < 0.001$) between the two types of pepper fruits, and the addition of hot pepper was more effective on the total viable counts which decreased the limits of studied product from $43.4 \times 10^3 \pm 1.3 \times 10^3$ at first day to $4.5 \times 10^3 \pm 1.0 \times 10^3$ after 96 hours, The *Staphylococcus aureus* test showed positive results with count (7.6×10^3) for crude, and (21.9×10^3) sweet pepper-treated Fassiekh, and negative for hot pepper-treated Fassiekh. The *Listeria* spp. test was found to be positive for Fassiekh treated with sweet and hot pepper, and negative for crude Fassiekh samples and *Staphylococcus aureus* and *Listeria monocytogens* test.

Keywords: Antimicrobial, Pepper, Spoilage, Organisms, Fassiekh, Wet-salted fermented fish.

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Research Paper

The Oxidative Damages Caused by Bacterial Growth in Foodstuffs

Sadighara P and Barin A.

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ABSTRACT

Obligate aerobes have respiratory metabolism with oxygen as the terminal electron acceptor. Therefore, they can produce ROS and oxidative damages in foodstuff which is contaminated. The egg yolks were incubated with different dilution of standard of *E.coli* and lipid peroxidation was assayed. The level of lipid peroxidation of high group (10

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) was 0.061 ± 0.01 as compared with control; 0.016 ± 0.003 . We concluded that pathogenic bacteria can induce oxidative damages plus other problems in food.

Keywords: Bacteria, Food, Oxidative stress

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