8th International Conference on

FOOD SAFETY, QUALITY & POLICY November 27-28, 2017 Dubai, UAE

Storage fungi and mycotoxins associated with stored smoked dried Catfish (Clarias gariepinus)

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Studies were carried out to determine the occurrence of storage fungi and their respective mycotoxin in stored smoked smoked fishes. A total of 45 fishes were bought fresh, smoked and stored under three different storage conditions (an air tight container, a bamboo basket and an iron basket). Isolation and identification of storage fungi were carried out weekly for four consecutive weeks from each storage condition/container. Mycotoxin detection and quantification were also carried out on each stored smoked fish samples using Agra-Quant kit. The proximate analysis of the stored fish samples prior to storage, and after storage from each storage container was also analysed. Results revealed five fungal isolates associated with the stored samples namely: Aspergillus flavus, A. fumigatus, A. niger, A. wentii and Penicillium species. Four species of Aspergillus and one Penicillium species were isolated and identified from two of three storage condition used (bamboo basket and iron basket) from third week of storage. It was deduced from the mycotoxins analysis results that Aflatoxin B1 and Ochratoxin were present in the stored smoked samples of the two above mentioned storage containers. Results from the proximate compositions revealed a decrease in the ash content, crude fibre and crude protein as the storage period increases. Fat and in moisture content of the stored fish samples were observed to increases weekly throughout the storage period in bamboo basket and an iron basket. In conclusion, it can be deduced that storage container play a vital role in the preservation/shelf -life of smoked dried fish.

Biography

Dr. Mrs. T. O. Samuel is an articulate Mycologist and Plant Pathologist. Her interest lies on fungi from any form of substratum with focus on postharvest control. She belongs to a number of society bodies which include Botanical Society of Nigeria, Nigerian Society of Experimental Biology, Nigerian Society for Plant Protection and to mention a few.

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