QUALITY OF SMOKED FISH FROM THE WINAM GULF OF

LAKE VICTORIA, KENYA

BY

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ABSTRACT

This study examined the microbiological load of smoked *Lates niloticus* (L) and tilapia from Lake Victoria. A total of 44 *Lates niloticus* and 45 tilapia specimens were analyzed. Total plate counts of bacteria, counts of *Escherichia coli* (E), *Salmonella* spp. detection , detection and quantification of *Staphylococcus aureus, Vibrio* spp., coliform counts and lastly determination of Most Probable Number (M.P.N.) of faecal coliforms were undertaken. Samples of smoked Nile perch and tilapia specimens were collected from selected beaches and markets within the Winam Gulf of Lake Victoria and taken to the laboratory in sterile and sealed containers within 48 hours. *Salmonella enterica* species were absent. *Vibrio* spp. were absent from all the specimens except in tilapia from Homa-Bay Pier market. *Staphylococcus aureus* was present in samples from all the markets and beaches except Homa-Bay Pier market where the organism was absent. Faecal coliform and total plate counts were present in samples from all the markets and beaches sampled. Coliforms were also present in samples from all the sampling stations. *Escherichia coli* was present in samples from all the markets except Homa-Bay pier market. It was present in samples from Mainuga and Balarawi beaches. Generally, the markets had higher counts of the bacteria than the beaches. The number of bacteria reduced with smoking but increased again with increase in storage period. Sanitary conditions at the beaches and markets should be improved. Likewise, roads to the beaches should be made all-weather so that the fish can reach the markets fast. Refrigeration facilities and/or ice should be provided at the landing beaches and at the smoking villages.