

# A STUDY ON THE OCCURRENCE OF *Escherichia coli* IN YELLOW FIN TUNA HARVESTED FROM THE SRI LANKAN SEA WATERS FOR THE EXPORT MARKET

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Fish and fishery product sector play an important role in Sri Lanka's economic sector. After the end of the three decade civil war, it has gained a significant growth. The sector contributes about 2.7% to country's *Gross Domestic Product (GDP)*. Fresh and frozen finfish is included in export seafood products as a majority. Yellowfin Tuna (*Thunnus albacares*) and big eye Tuna (*Thunnus obesus*) are a principle variety of finfish exported from Sri Lanka. Major Sri Lankan seafood export destinations are European Union (EU), southeast and East Asia countries (Vietnam, Singapore and Japan)

Contamination sources of these fish products with pathogenic bacteria could be varied with time, zone, processing and storing conditions. Verification of microbiological quality in processed finfish is done by identification of indicator organisms. *E.coli* is considered as the hygienic indicator which can contaminate fish by fecal contamination of water or poor hygienic practices during the process. Contamination is influenced by quality of ice, excessive handling, storage conditions and longtime transport.

Yellow fin Tuna (*Thunnus albacares*) was selected to study the occurrence of *E.coli* bacteria which were being processed to export. Raw fish samples were collected just before the packing step where final trimming of the loin has done. Later the final trimming, loins are packed and exported.

Samples were tested for presumptive Coliforms and then only positive samples were picked to carry out confirmation of fecal Coliforms. Thus, positive tubes from confirmatory test were utilized to isolate *E.coli* and confirmed by IMViC test.

Total 100 Tuna fish samples were collected and all samples were tested for presumptive Coliforms. Out of hundred, one sample was negative for presumptive Coliforms and hence it was not continued. 10 samples out of 100 were confirmed for the presence of fecal Coliforms (10%). Only one sample (Sample No. 33) was positive for *Escherichia coli* (1%) and it was confirmed by IMViC test.