

NON-SENSORY METHODS

Total Volatile Basic Nitrogen

The main spoilage test of metabolite(s) produced during fish storage or distribution to obtain a quantitative fish quality index is total volatile bases (TVB). It measures the total content of ammonia (produced by the deamination of amino-acids and nucleotide catabolites), dimethylamine (produced by autolytic enzymes during frozen storage), trimethylamine (produced by spoilage bacteria) plus other basic nitrogenous compounds associated with fish spoilage. TVB and TMA values of 30 mgN/100g and 15 mgN/100 g are the rejection spoilage levels respectively.

The fishy odour of TMA when it reacts with lipid is generally detectable when the TMA level reaches 4-6 mg/100 g.

Total Viable Count

Microbiological quality evaluation of fish aims to quantify the hygienic quality of fish, including temperature abuse and the possible presence of pathogenic microorganisms in the fish. Quality levels are based on the plate counts for acceptance or rejection of fishery products for human consumption. Plate counts below 5.5×10^5 are considered of good quality; between 5.5×10^5 and

10^7 marginally accepted quality and plate counts at or above 10^7 are considered unacceptable in quality (ICMSF, 1986).