



## Summary

Spoilage is the degradation of food such that the food becomes unfit for human consumption. Food can be spoiled by a number of means, including physical and chemical. However, the most prevalent cause of food spoilage is microbial growth on foods, which results in numerous undesirable metabolites being produced in the food that cause unwanted flavors and odors. Approximately 25% of the world's food produced post harvest or post slaughter is lost to microbial degradation of food alone. Immediately after capture, several chemical and biological changes take place in dead fish which can ultimately lead to rejection for human consumption because of spoilage. Compared to other foods, fish is unique as a substrate for microbial growth. This uniqueness stems from several important factors like the poikilotherm nature of fish, a high post mortem pH in the flesh (typically greater than 6.0), the presence of non-protein-nitrogen (NPN) in large quantities, and the presence of trimethylamine oxide (TMAO). The occurrence of spoilage in fish is manifested and perceived by the end user through changes in several sensory perceptions, including odor, color, shape, texture, and composition. Like meat, fish and other sea foods may be spoiled by autolysis, bacterial activity or chemical reactions or most commonly by combination of these. Preservation usually involves preventing the growth of bacteria, yeasts, fungi, and other micro-organisms as well as retarding the enzymatic activity and oxidation of fats which cause fish spoilage. There are various methods employed for preservation of fish such as, chilling, freezing, curing, smoking, dehydration, canning, radiation preservation etc.