

Effects of Various Salts on Flavor and Texture Quality
of Fish Meats

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Summary

Muscle pieces of red seabream Pagrus major and yellowtail Seriola quinqueradiata were soaked in solutions of various types of commercial salt and tested organoleptically for flavor and texture quality. Contents of free amino acids, nucleotides and soluble protein nitrogen were compared in the muscle pieces treated with the different types of salt. There was little difference in saltiness, umami and texture (hardness) among the red seabream muscle treated with all types of salt, while significant difference was detected in thickness and overall flavor quality between purified and all other types of salt. Any flavor and texture attributes in the yellowtail muscle did not differ between these salt types used.

The muscle of red seabream was rich in taurine, serine, glycine, alanine and lysine; little difference was observed in amount of these free amino acids among the muscles with these salt types. The muscle of yellowtail was greatly abundant in histidine, followed by lysine, glycine, alanine, taurine and glutamic acid, while little difference of content was found among the muscles. IMP and inosine occurred in large quantities in the muscle of both red seabream and yellowtail; the difference was statistically insignificant among the muscles with the salt types. The muscle of red seabream soaked in purified salt solutions showed higher levels of soluble protein nitrogen than that done in the other types. This evidence suggests that the difference in thickness and overall flavor quality partly arised from the difference in quantity of soluble protein.