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Effect of Food Additives on Texture and Smell of Silver Carp (*Hypophthalmichthys molitrix*) Mince

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Characteristics of silver carp mince mixed with food additives, such as vital gluten, soy protein isolate, polysaccharides (β-1,3-glucan and potato starch), transglutaminase (TG-ase) and cyclodextrin, were studied. After storage at a low temperature or after heat treatment, the breaking strength of the samples was measured using a texture analyzer. The sensory characteristics of binding properties, color and smell were also evaluated. When fish mince was mixed with vital gluten, soy protein isolate, β-1,3-glucan and potato starch, the gel strength of the samples increased after heat treatment. When TG-ase was used, the binding properties improved after storage at the low temperature of 4°C. When cyclodextrin was used, the gelling properties were not improved, however, the earthy smell of the samples was attenuated. Soy protein isolate masked the earthy smell. We concluded that it is possible to utilize silver carp mince as a food material with good gelling properties by mixing with other proteins such as soy protein isolate or vital gluten.

Keywords: fish mince, binding properties, sensory characteristics, silver carp

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