

Title From Fresh to Rot: Physical changes of Fish Appearance
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Abstract

Fish start to deteriorate once dead. Usually low temperature treatments were used to minimize or slow down the deterioration. This work is to study the physical changes of the fish body, skin and gill, while the fish is under ambient and low temperature treatments. Five species of tropical fish typical to Malaysian wet-market, namely *Megalaspis cordyla* (Cencaru), *Thunnus tonggol* (Tongkol), *Epinephelus coioides* (Kerapu), *Selaroides leptolepis* (Selar), *Nemipterus peronii* (Kerisi), were used. Two storage conditions were studied, which are: a) ambient temperature storage, and b) ice storage. Parameters studied are body firmness index (using force-deformation machine), skin color, and gill color (using a color meter). For the ambient temperature experiment, data were collected every 2 hours, and for the ice storage experiment, data were collected every 24 hours, until the fish rotted. The result of this work indicated that under ambient temperature (usually found at Malaysian wet markets) the fish will stay acceptably fresh until about 10 hours after catch, and will deteriorate at a faster rate after that. While under ice storage, all fish studied stayed fresh for at least 21 days. The *Megalaspis cordyla* (Cencaru) can be kept fresh the longest (>30 days) under ice, while *Nemipterus peronii* (Kerisi) can barely last 21 days. The gill color is the best indicator of the fish freshness, even if other parameters barely indicate the fish state.