

Title Development of new quality index method (QIM) schemes for cuttlefish (*Sepia officinalis*) and broadtail shortfin squid (*Illex coindetii*)

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Abstract

This article describes the development of sensory schemes for freshness grading of cuttlefish (*Sepia officinalis*) and broadtail shortfin squid (*Illex coindetii*) based on the recent quality index method (QIM). As preliminary work, four storage experiments were performed to choose the relevant sensory parameters for building the schemes. From an initial large set of parameters, some were chosen to be attributes for the QIM scheme. For cuttlefish, appearance, odour and mucus of skin, texture of flesh, cornea and pupil transparency, odour of the mouth region and connection between bone and head tissues; and for squid, appearance, odour and mucus of skin, texture of flesh, appearance of the eyes and ocular tissue brightness and odour of the mouth region. Five storage experiments were then used to test the tables and to shelf-life studies. The shelf-life, as measured by sensory attributes, is considered to be 10 days in ice for cuttlefish and 9 days in ice for squid. Sensory and shelf-life differences between these two species can be explained by morphological and biological reasons that probably include higher rigidity of the cuttlefish caused by the presence of the internal bone. For both species a high correlation between the quality index and the storage time in ice was obtained.