

Title Evaluation of texture parameters of Rohu fish (*Labeo rohita*) during iced storage
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Abstract

The textural parameters of Indian major carp *Rohu* fish (*Labeo rohita*) during iced storage have been studied during iced storage for the duration of eight days. Textural parameters, viz. skin hardness, toughness and stiffness has been evaluated on a texture analyzer for the different day of iced fish. The abruptly reduction in skin hardness (bio-yield point) and toughness was observed after fifth day of storage. The skin hardness ranged between 86.911 and 95.656 N within five days of storage and thereafter reduced within the range from 48.714 to 65.920 N. The stiffness ranged between 3.1474 and 4.6340 N mm⁻¹ and toughness, 588.9–713.2 N mm for five days. After five days of storage, the stiffness and toughness reduced in the range of 2.0030–2.8111 N mm⁻¹ and 415.0–526.3 N mm, respectively. During this storage period the pH of fish flesh was also determined with pH meter. The pH increased from 6.10 to 6.90 during the period of storage. Exponential regression presents the relationship between fish flesh stiffness F_s and pH with coefficient of determination 0.9695 and standard error 0.167. The results of skin hardness curve were fitted to modified Maxwell model. The modified Maxwell model could satisfactorily described relationship between skin hardness and compression time for iced fish with the coefficient of determination ranged from 0.9910 to 0.9967 and standard error ranged from 1.184 to 2.014. The coefficients of Maxwell model were further fitted in exponential expression to relate with the days of storage. Thus, the developed Maxwell model could predict the skin hardness for fish with an error of 0.06%, which was within the limit of experimental uncertainty of 5.54%.