

研究论文

鳙在冷藏和微冻贮藏下品质变化规律的研究

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摘要:

文章研究了鳙 (*Aristichthys nobilis*) 在不同贮藏温度下的品质变化规律。将经过前处理的鳙分别贮藏在4 ℃和-3 ℃中, 通过测定其感官和理化指标, 即总挥发性盐基氮 (TVB-N)、硫代巴比妥酸 (TBA)、鲜度K值、pH、汁液流失率和蒸煮损失率, 评价不同温度对鳙品质的影响。结果显示, 鳙分别在4 ℃贮藏至第10天和-3 ℃贮藏至第30天时失去感官食用品质。但K值在4 ℃贮藏至第6天和-3 ℃贮藏至第20天超过临界值。4 ℃下鳙的TVB-N显著高于-3 ℃。在整个贮藏过程中TBA均未超过2.00 mg·kg⁻¹的限量值, 说明TBA不适合单独用于评价鳙的品质变化。pH分别在4 ℃贮藏至第4天和-3 ℃贮藏至第10天达到最低值, 分别为6.81和6.76。与4 ℃相比, -3 ℃下鳙的汁液流失率和蒸煮损失率较高, 这可能与-3 ℃微冻条件下鳙肌肉组织冰晶生成导致持水力下降有关。综合K值和感官指标的变化, 4 ℃和-3 ℃下鳙的货架期分别为6 d和20 d, 且-3 ℃贮藏能明显延长鳙的货架期。

关键词: 鳙 冷藏 微冻 感官品质 理化分析

Quality changes of bighead carp (*Aristichthys nobilis*) during chilled and partial freezing storage

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Abstract:

We investigated the effect of storage temperature (-3 ℃ and 4 ℃) on quality changes of bighead carp (*Aristichthys nobilis*) by observing total volatile basic nitrogen (TVB-N), 2-thiobarbituric acid (TBA), K value, pH, drip loss, cooking loss and organoleptic properties. Results show that *A. nobilis* lost sensory and edible quality when stored at 4 ℃ at 10th day and at -3 ℃ at 30th day. However, the K value exceeded the critical limit at 4 ℃ at 6th day and at -3 ℃ at 20th day. The TVB-N at 4 ℃ was significantly higher than that at -3 ℃. The TBA did not exceed the limit of 2.00 mg·kg⁻¹ at both -3 ℃ and 4 ℃ throughout the storage, indicating that TBA is not a good indicator for assessing the quality changes of *A. nobilis* when used alone. The pH reached the minimum of 6.81 at 4 ℃ at 4th day and of 6.76 at -3 ℃ at 10th day. The drip loss and cooking loss at -3 ℃ were higher than those at 4 ℃, which may due to the reformation of ice crystals and decline of water-retaining capability. It is concluded that the shelf life of *A. nobilis* is 6 d at 4 ℃ and 20 d at -3 ℃. Besides, partial freezing at -3 ℃ can extend the shelf life significantly.

Keywords: bighead carp (*Aristichthys nobilis*) chilled storage partial freezing sensory quality physico-chemical analysis

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