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Czech J. Food Sci.

Cao R., Xue Ch.-H., Liu Q., Xue Y.:

Microbiological, chemical, and sensory assessment of Pacific oysters (*Crassostrea gigas*) stored at different temperatures

Czech J. Food Sci., 27 (2009): 102-108

The changes were studied in microbiological, chemical, and sensory properties of Pacific oysters stored at 10 ° C, 5 ° C, and 0 ° C. *Pseudomonas* (22%) and *Vibrionaceae* (20%) species were dominant in raw oysters. The dominant bacteria found in the spoiled samples were *Pseudomonas* regardless of the storage temperature. During storage, rapid increases in aerobic plate count (APC) values of the samples stored at 10 ° C and 5 ° C were observed, while no obvious lag phases were detected. With the samples stored at 0 ° C, a decrease in APC value during the first 4 days and a lag phase of about 6 days were observed. The APC values of the samples stored at 10 ° C, 5 ° C, and 0 °

6, 10, and 18, respectively. All the tested samples stored at different temperatures revealed a slight decrease in pH and a significant increase of total volatile basic nitrogen (TVB-N) during storage. The average TVB-N concentration of about 22.0 mg N/100 g was observed at the end of the shelf-life as determined by APC. Combined with the sensory assessments, the shelf-life of 6 – 7, 10 – 11, and 17 – 18 days for oysters stored at 10 ° C, 5 ° C, and 0 ° C, respectively, was determined.

Keywords:
Pacific oyster; microbial flora; quality assessment; shelf-life

[fulltext]