

Cadaverine Level and pH: Indicator of Spoilage in the Flesh of Fish (Carp, Mackerel and Jaw) Storage at Different Temperatures

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ABSTRACT

Cadaverine (CAD) is an indicator of spoilage in fish. Its level was determined by spectrofluorimetric method in the flesh of selected species of fish stored at -10, 4, 22 and 32°C. Average recovery rates obtained ranged from 87.9 to 101.4% for all species. It was found that CAD was present in all fish species used and its level was essentially constant during storage at -10°C for 32 days. At 4°C, the variation in CAD level was characterized by a stable phase during the first two weeks followed by a descending phase. Over a period of three of storage, CAD levels tripled at temperatures of 22°C and 32°C. Variations in CAD levels were also accompanied by a significant variation in the pH value. Slight pH variations were also observed when fish was stored at -10°C for 32 days and for 18 days at 4°C. Beyond these times, pH values increased significantly. The pH of the fish flesh increased sharply during storage at 22°C and 32°C. The Pearson treatment correlation study indicated a strong positive correlation (0.81 and 0.93) between CAD and pH for all samples stored at 22°C and 32°C, respectively.

Keywords: Cadaverine, Spectrofluorimetric method, pH variations

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