



## SENSORY ANALYSIS OF THE FRESHNESS OF THREE COMMERCIAL FISH SPECIES MARKETED IN IRAJÁ/RJ

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### RESUMO

Global interest in fish consumption has surged due to its nutritional value and associated health benefits. Being rich in proteins and fatty acids, fish is highly perishable, and its deterioration is influenced by factors such as origin, species, and storage conditions. Consequently, effective conservation methods are essential, with cold storage being a longstanding solution. Refrigeration mitigates microbial activity and chemical reactions, thus preserving sensory quality and freshness during distribution and sale. The sensory attributes of fish, including appearance, odor, flavor, and texture, are closely linked to its freshness and are assessed immediately post-mortem, being considered legal parameters for this evaluation. In this context, the Quality Index Method (QIM) is relevant and widely used in the inspection of fish. This study evaluated the deterioration of three fish species—"corvina" (*Plagioscion squamosissimus*), "pescada" (*Cynoscion leiarchus*), and "trilha" (*Pseudupeneus maculatus*)—over a ten-day period. These species were acquired from a fishmonger in Irajá/RJ, where they were being preserved using ice, which was also used during transport, using an insulated box. They were stored under refrigeration using only cooling as a preservation method at an average household refrigerator temperature. The assessment integrates the QIM and daily photographs, complying with Brazilian legislation guidelines. Each species underwent evaluation using a QIM score table, resulting in demerit scores detailed in the study findings. The quality parameters evaluated for the three species were: general appearance (from metallic shine to dull), abdomen (from firm to burst), scales (from firmly attached to loose), coloration (natural or altered), eyes (from flat and bloodless to deformed and bloody), odor (from fresh to putrid), gills (from bright red to brown/green), mucus (from absent to excessive), and anus (from closed and fresh to open and putrid). Throughout the ten days of analysis, the temperature of both the refrigerator and the fish fluctuated due to their continuous use as household appliance. The refrigerator temperature ranged from 0.9°C to 7.1°C; the "corvina" from 1.9°C to 7.2°C; the "pescadinha" from 4.0°C to 9.8°C; and the "trilha" from 5.8°C to 12.7°C. According to the MIQ table, "trilha" had the highest demerit score, exhibiting significant signs of deterioration from the outset, followed by "corvina" and "pescadinha". All three species deteriorated during the analysis and were unfit for consumption from day 4 using QIM assessment, despite being within their shelf life of 10 to 15 days.

**PALAVRAS-CHAVE:** Inspeção, Seafood, Refrigeration, Deterioration

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