

Shelf Life of Chilled Shrimp from Main Wholesale Outlet in Al-Qatif City (Eastern Province)

M.M. Al-Dagal, S.M. Al-Khalifa, I.A. Al-Sheddy

*Food Science and Nutrition Department, College of Agriculture,
King Saud University, Riyadh , Saudi Arabia*

(Received 21/5/1419; accepted for publication 28/10/1419)

Abstract. This study was initiated to determine the shelf life of chilled shrimp (*Penaeus*) from five sources in the Arabian Gulf. These sources are Darin (1) and (2), Manefiah (3), Jubail (4) and Khafji (5). Changes in microbial psychrotrophs, total volatile basic nitrogen, pH, and sensory characteristics of shrimp (fresh and cooked) were assessed every 72 hr for nine days of cold storage. Sensory evaluation data indicated the acceptance of the chilled shrimp samples from the five sources until the 9th day of storage. First source (1), however, was scored better. In reference to cooked shrimp, samples from sources (3) and (5) were rejected based on general appearance and taste scores while samples from source (4) were rejected based on taste score only after six days of cold storage. Samples from Darin, however, were acceptable until the 9th day for all sensory characteristics. Microbiological data indicated that shrimp samples from sources (3), (4) and (5) reached the rejection level (10^8 CFU/gm) after six days of storage while samples from Darin rejected thereafter (> 7 days for source 1 and > 9 days for source 2). Based on TVBN values, only samples from Manefiah were rejected on the 6th day, while samples from source (2), (4) and (5) were rejected after nine days of storage. Shrimp from source (1) had TVBN values below rejection level (30 mg/100gm) until the end of the storage period. PH values did not exceed 7.70 for any shrimp samples by the end of study period, at which the least value (7.56) was recorded for the first source.