

A STUDY OF SPOILAGE IN PRAWNS STORED IN ICE

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Prawns of head-on and headless types were stored in ice and assessed for organoleptic quality and indole. Organoleptic quality was assessed using a 7-point hedonic scale, 7 being very good 1 very poor, by a panel of 6-9 judges. Indole content was analysed using the modified spectrophotometric method².

The organoleptic quality deteriorated significantly, after a period of about 16 days in ice, in both head-on and headless prawns. Although absorbance at 570nm was present, the visible absorption spectrum did not indicate the presence of pure indole in prawn extracts up to 15 days in ice. The absorbance, it was suggested, was due to some substance similar to "Apparent Indole" or "Indole reacting substance" reported in fresh oysters and clams¹. Spectrally confirmable indole was found to be associated with prawns of poor organoleptic quality. Indole content of more than 30 μ g/100g was shown to indicate organoleptically unacceptable quality, although presence of lower levels would not necessarily mean good quality. Organoleptic quality of head-on prawns appeared to deteriorate faster than headless samples during the storage period, possibly due to the increased enzymic activities present in the head-on prawns. The rosindole complex formed when Ehrlich's reagent was added to prawn extracts, showed changes in absorbance at 570nm after keeping overnight. This aspect needs further study as it might give some information on the nature of indole related substances formed in prawns.

References

1. Beacham, L. M., *J. Assoc. Off. Agr. Chem.* 29 (1) 89 (1946).
2. Cheuk, W. L. and Finne, G. *J. Assoc. Off. Anal. Chem.* 64(4) 783 (1981).