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A STUDY OF
ORGANOLEPTIC QUALITY AND THE FORMATION
OF INDOLE IN PRAWNS STORED IN ICE

by

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SUMMARY

Prawns of whole and headless types consisting of nearly equal composition of two important species, Penaeus indicus and P. semisulcatus, were stored in ice and assessed for organoleptic quality and indole content. Organoleptic quality was assessed using a 7- point hedonic scale rating with 7 being very good and 1 very poor by a panel of 6-9 judges who had no previous experience in the sensory evaluation of prawns. Indole content was analysed using the method reported by Cheuk and Finne (1981) with some minor modifications.

The organoleptic quality deteriorated significantly, after a period of around 16 days in ice, in both whole and headless prawns. Organoleptic quality of whole prawns appeared to deteriorate slightly faster than headless prawns during the storage period, possibly due to the increased enzymic activities present in the whole prawns.

Although absorbance at 570nm was present, the visible absorption spectrum did not indicate the presence of pure indole in prawn extracts upto a period of 15 days in ice. The absorbance, was suggested, due to some substance similar to "apparent indole" or "indole reacting substance" reported in fresh oysters and clams by Beacham (1948). Spectrally confirmable indole was found to be associated with prawns of poor organoleptic quality. Indole content of more than 30µg/100g was shown to indicate organoleptically unacceptable quality, although presence of lower levels would not necessarily mean good quality. 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.