

Scomberoides lysan, *Sardinella albella* and *Pennahia anea*, respectively. The Total Volatile Base Nitrogen (TVB-N) exceeded 35 mg/100g after 2 days, 6 days, 8 days and 21 days of iced storage of *Pentapirion longimanus*, *Sardinella albella*, *Scomberoides lysan* and *Pennahia anea*.

AV OR 12

Valorisation of paste shrimp (*Acetes* spp.) for the production of protein hydrolysate

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Paste shrimp forms major group of by catch among non-penaeid prawn landings of India. Commonly it has been utilized for the preparation of fish meal and dried product. Conversion of this underutilized species for the production of protein hydrolysate is one of the effective way of increasing the price or value. The preparation of protein hydrolysate was done by enzymatic hydrolysis using alcalase on which the conditions were optimized through response surface methodology using central composite design (CCD). Different parameters such as degree of hydrolysis, antioxidant properties and antihypertensive properties were studied and found to have efficient biological activities. In addition to that, functional properties of protein hydrolysate were evaluated and found to have good solubility, foaming and emulsifying properties proving that paste shrimp protein hydrolysate could be used for fortification of food. Therefore, it is concluded that *Acetes* protein hydrolysates contain potential bioactive properties that could be utilized in the application of functional foods

and nutraceuticals. In addition to that, good amount of functional properties was obtained which can be used in the foam, emulsion formation. Further investigations could be carried out in the purification of bioactive peptides from *Acetes* spp. for nutraceuticals purposes.

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Effect of dietary fibres on the functional properties of heat induced fish gels

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Dietary fibres can be an effective tool in seafood processing for improving functional properties of products such as water binding, gelling, etc. In this study, heat induced gels prepared from threadfin bream (*Nemipterus japonicus*) containing one of the three types of dietary fibres (wheat fibre, oats fibre and psyllium fibre) was evaluated with respect to the functional properties. Dietary fibre was incorporated at 2% level to the fish mince. Addition of dietary fiber increased the water holding capacity of the fish gels. The cooking yield was significantly higher for oat fibre incorporated fish gel. Wheat fibre incorporated fish gels were whiter; however the hardness and cohesiveness were lower than oat fibre incorporated gels. The folding score of oat fibre incorporated fish gel was significantly higher among the samples. Among the dietary fibres oat fibre was found to be the best option as it did not affect the textural properties when compared to the control whereas psyllium fibre had a negative effect on the textural properties of the fish gels. Sensory evaluation of the samples indicated that addition of dietary fibre did not affect the flavour of the fish gels.