

Preparation of Edible Powder from Jawla (*Acetes* sp.) Prawns

In spite of the heavy landings of jawla prawns in Maharashtra, it fetches only very poor returns to fishermen. The present practice is to sun dry the whole prawn on the beach and is marketed as such. But the product is poor in appearance and unhygienic. Attempts to prepare edible fish flour were made by Pillai (1957), Moorjani *et al.* (1962) and Ismail *et al.* (1968). But they employed various solvents to remove fat. Solanki *et al.* (1977) prepared edible fish powder from dhoma meat without solvent extraction of fat. Garg *et al.* (1977) prepared protein powder from jawla prawn, by drying heat coagulated pulp in the sun and under vacuum.

Four methods were employed for the preparation of prawn powder in this study. In the first method fresh jawla prawns were thoroughly washed with potable water to remove slime and dirt and were spread in thin layers on shelves of a hot oven at 40°C. After 24-28 h drying, prawns were pulverized to a fine powder in a table mill and sieved using a sieve of 3600 meshes/sq. inch; moisture, protein, fat,

ash and bacterial load of the powder were determined. In the second method, prawns were washed and oven dried at 60°C for 8-10 h, pulverized to a fine powder and studied as described above. In the third method the washed jawla prawns were beheaded, washed again and oven dried at 40°C for 24-28 h and powdered. In the fourth method the sun dried prawns procured from the market were dried for 4-6 h in oven at 40°C and used.

The analytical characteristics and bacteriological quality of the edible powders are presented in Table 1. The first method gave good quality powder, followed by method 2. Powder prepared from beheaded prawns was found to be very good but the beheading was time consuming with lesser yield. In the case of sun dried jawla prawns procured from the market high counts of viable bacteria and coliforms were noticed. Preparations of prawn spirals, prawn khabab, prawn puris and prawn wafers with powder obtained under method 1 and 2 were satisfactory. The preparation of powder is simple and hygienic with little

Table 1. Proximate composition and bacterial quality of prawn powder prepared by different methods

Method	Crude protein %	Ash %	Fat %	Moisture %	Total plate count/g	Coli- forms/g	Salmo- nella/g
1	61.25	19.60	6.50	15.66	40.5 x 10 ⁴	Nil	Nil
2	66.50	17.40	6.20	12.26	40.0 x 10 ⁴	Nil	Nil
3	63.73	17.20	4.03	12.70	30.0 x 10 ⁴	2	Nil
4	60.60	18.78	10.50	15.66	30.0 x 10 ⁴	20	Nil

alteration in protein. The low cost and easy availability of jawla prawns are added advantages of using it for the large scale preparation of powder.

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