

## **Fish Protein Concentrates (FPC)**

The term fish protein concentrate (FPC) usually refers to fish meal intended for human consumption. The term may apply to a variety of products that, broadly speaking, fall into two categories, FPC type A and FPC type B.

Under the term FPC type A we find fish meals that, through special processing techniques, have been made practically odour-free and tasteless. The most common method commercially used so far is based on wet extraction with isopropanol or ethanol. In spite of its high nutritional value, FPC type A has failed to find a market of commercial interest, largely because of poor so-called functional properties, but also because of the relatively high costs of production. Efforts to improve the functional properties of the product, especially by lowering the processing temperatures, are still being made. Whether this will contribute to the opening of an interesting market., remains to be seen.

The FPC type B category is comprised of products where measures have not been taken to conceal that they originate from fish. Basically, FPC type B is produced by using the same processing principles as are used for ordinary fish meal, that is mechanical extraction of the oil and removal of water by evaporation and drying. The main differences from traditional production methods are stricter requirements for fresh raw material and for better hygienic standards being applied to equipment and premises. Methods of handling all the way from catch to product, as well as the quality of the ultimate FPC, should also comply with the regulations of the food control and inspection authorities. Experience has shown that the bacteriological standard tentatively agreed upon by internationally recognized experts, is difficult to reach by conventional factories, but improved equipment has been developed to facilitate cleaning and inspection. Although FPC type B is being used in relief programmes to improve nutrition in a number of developing countries, no product has so far attained the status of an internationally recognized commercial food commodity. Further development work is needed, firstly to define more precisely the quality criteria of products with the widest possible acceptability and, secondly, to develop technology that combines good performance with sound economics.