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PROTEOLYSATE OF SARDINES ^{1/}

by

B. De Gero
Biochemist
Head of Oceanographic Station
Institut Scientifique de la Pêche Maritime
Rabat, Morocco

G. Skired D.Sc., I.L.P.
Director-General
Société Privée de Développement Economique "S.F.D.E".
Rabat, Morocco
and
Société G.M.
Rabat, Morocco

^{1/} The views and opinions expressed in this paper are those of the authors and do not necessarily reflect the views of the secretariat of UNIDO.

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In 1965, the Institut Scientifique Marocain de la Pêche included in its research programme a study of the production of marine proteolysate using the Moroccan sardine. Following highly encouraging laboratory findings, it was found necessary to collaborate with private enterprises at the industrial level with a view to organizing and financing industrial operations.

The process consists in the production of a marine proteolysate from a raw material whose processing is very difficult (sardina pilchardus or any other seafood or fish waste), using various enzymes in an acid medium. This process was patented in Paris on 29 May 1967 under No. 100,202.

The product obtained is entirely natural, from the organic and biological as well as the metabolic points of view, and can therefore be assimilated by the human body; it resembles our tissue and cell structure since it is produced according to a biological principle. As is shown in the following table, it contains all the indispensable amino acids as regards both quantity and quality, and all the biocatalysts (vitamins) except for vitamin C.

This sardine proteolysate is a whitish powder with an odour somewhat resembling that of powdered milk; its flavour depends on the percentage of free amino acids.

Its price, on the basis of 0.055DH per kg of sardines, is approximately 1.80 to 2DH per kg. The capital outlay for equipping a plant with a capacity of 1,000 t/year is 3,500,000 to 4,000,000DH.

COMPARATIVE ANALYSIS OF SOME PROTEIN CONCENTRATES

Composition	Per line protein (g/100g)	Block 100g	Flour (1 ml)
<u>Biochemical</u>			
Total protein	75-85%	10.00	10.00
Ash	5.5-15%	3.00	3.00
Moisture	4%	11.00	1.00
Lipids	0.50%	5.00	10.00
<u>Essential amino acids</u>			
Isoleucine	4.00%	6.00	8.50
Lysine	8.25%	7.50	7.25
Leucine	6.70%	7.00	11.00
Methionine	2.10%	2.30	3.40
Histidine	2.54%	2.90	2.70
Phenylalanine	3.40%	1.30	5.70
Threonine	3.50%	3.30	4.30
<u>Vitamins, in mg/100g</u>			
A	0.80	0.004	1.00
B1	0.055	0.05	0.05
B2	0.30	0.20	0.70
B12	0.018	-	-
PP	0.48	Traces	0.40
B6	0.15	-	-



