ELECTROPHORETIC CHARACTERISTICS OF OIL SARDINE *(SARDINELLA LONGICEPS)* AND MACKEREL *(RASTRELLIGER KANAGURTA)* EYE LENS PROTEINS

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Electrophoresis of eye lens proteins of oil sardine and mackerel showed separation of proteins into three and four components, indicating the heterogeneous nature of the population.

INTRODUCTION

The serological and biochemical approach for identifying fish species and populations has been excellently reviewed by Ligny (1969). The search for intraspecific differences by electrophoresis of the eye lens proteins was initiated by Smith (1962 and 1965). The oil sardine and mackerel constitute commercially important fisheries of India. Earlier studies were mainly related to their morphometric and meristic counts (Balakrishnan, 1965; Prabhu and Dhulkhed, 1972). To identify the different groups, if any, preliminary investigations on the electrophoretic characteristics of the eye lens proteins of these fishes were conducted at Mangalore during December, 1973 to February, 1974.

MATERIALS AND METHODS

Eye lens of both the sides of oil sardine and mackerel (10 nos. each) collected in fresh condition between Malpe in the north and Cannanore in the south, were first removed. The nuclei were then squeezed out, cleared of aqueous humor and dried on a blotting paper. The nuclei were stored in a refrigerator for not more than 48 hours. The two nuclei of each sardine and mackerel were placed separately in test tubes containing 0.5 ml. and 1 ml. of 0.9% sodium chloride respectively and were thoroughly minced by means of a glass rod till the extracts became evenly milky. The extracts were kept in a refrigerator and centrifuged the next day. An application of 3 μl. of eye lens extract was made on a cellogel strip and the method described earlier for electrophoresis (Dhulkhed and Rao, 1976) was followed. The strips were stained by Amido black and read on the densitometer.

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