CHANGES IN BIOCHEMICAL COMPOSITION OF MUSCLES OF AN INDIAN MAJOR CARP *Labeo rohita* (Ham) IN INFLUENCE OF AGE

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ABSTRACT

Present investigation carried out on changes in body traits and biochemical composition of muscles of an Indian major carp – *Labeo rohita* (Rohu) in influence of age. Various biochemical component of muscles i.e. moisture, fat, protein, amino acid (lysine and tryptophan), cholesterol content were analyzed by using different standard method. In muscular composition some component increases, some decreases while some varied significantly with age.

Key words : Muscles, Age, Biochemical composition, *Labeo rohita* (Ham).

The nutritive and medicinal value of fishes have been recognized from time immemorial, fresh fish flesh provide an excellent sources of protein for human diet. The protein is of relatively high digestibility, biological and growth promoting values for human consumption. Nutritional studies have proved that fish protein comprises all the ten essential amino acid is desirable strength for human consumption. This accounts for high biological values of fish flesh. Among Indian major carps, Rohu is the best in protein quality and is supposed to be tastiest fish and highly preferred by consumers. However very little information is available on the body traits and biochemical changes in muscles in relation to influence of age. Present study based on biochemical composition of muscles of fish in influence of age. This aspect is important for the industries and consumers.

MATERIALS AND METHODS

Indian major carps *Labeo rohita* (Ham.) 'Rohu' selected for the experiments. Fish of different age groups-6 months, 18 months, 36 months and 60 Months are used during the observation. Age of the experimental fishes was determined as given by the Tondon and Johal (1996). The representative sample of flash was taken from different parts of the body. Wet samples were weighed, and then kept in oven at 70C temperature for 6-8 hours for drying. After drying all the samples were removed from the oven and placed into desiccators in order to avoid contamination from atmosphere. Before the start of biochemical analysis, the samples were grinded to fine powder with the help of pastel and mortar for sake of analysis and powder were stored in airtight bottles. Protein, fat, carbohydrate, tryptophane, lysine, cholesterol, total ash content, organoleptic taste were analyzed with the help of Lowry's method (1995); Soxhlet method, A. O. A. C. (1970); Yam and Willis (1954); Spies and Chamber (1949); Felker et al., (1978); Cheyne (1964); Hart and Fisher (1971) and Amerine *et al.,* (1965) respectively. For statistical analysis Randomized block design (RBD) suggested by Gomez and Gomez (1984) has been used.

RESULTS AND DISCUSSION

Biochemical component of various aged fishes has been studied such as moisture content, Protein, Fat, Carbohydrates, Cholestrol, Tryptophane, Lysine, Ash content which were changed with age are given as in table 1. Highestmoisture content has been reported in 6 months fish (79.81 %) where as minimum in 60-month fish (77.60 %). The fat content ranged between 1.60 to 2.98 percent in 60 months old fish followed by 2.73, 1.88 and 1.60 in thirty six, eighteen and six months old fishes respectively. The protein content was range between 18.40 to 16.60 percent during observations. The maximum 18.40 percentage of protein was in six months old fish were as minimum 16.60 percent protein was record in sixty months old fish. The maximum Tryptophane 70.18mg/g N was found in sixty months of fish followed by66.00, 62.30 and 50.30 mg/g N was recorded in six months of fish's maximum lysine content 572mg /g N was observed in sixty months old fish where as minimum