Studies on the Inorganic Chemical Constituents of Marine Fishes—X

On the Distribution of Iron and Aluminum

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Abstract: The distribution of Fe and Al in several marine fishes were investigated. The quantities of these two elements are more than those of Cu, Pb and Zn in most cases.

Fe and Al are most found in inner organs such as liver, heart and spleen, but least in stomach and pyloric coeca. These elements are also poor in hard parts such as bone, head, gills and cuticle (scale).

Flesh contains Al more than Fe in all cases, and this fact is perhaps characteristic of the flesh. (see Fig. 1.).

The difference in relative quantities of Fe and Al in flesh can be seen in such cases that one is a part and another is the other of the same fish. For example; the belly flesh of Seriola quinqueraditala is richer in Al than the back, although these two parts have almost the same quantity of Fe, and red flesh of Katsuwonus pelamis is richer in Al and Fe than white one (see Fig. 1.).

In bones and scales Al is richer than Fe, on the other hand in gills Fe is richer than Al (see Fig. 2.).