Acid- and base-resistant fish, determined with 32P as radiotracer. 0.13 mc 32P, E.B. Wolb., J.A. van der Velden, H. Beesems & S.R. Ablesons. Brookwater fish absorb the major part of ions such as Na+ and Ca2+ needed for growth and homeostasis directly from the water via their gills (1 Pilk et al. 339, 1983). This implies that the specific activity of the Na+ entering the blood (v), the radioactive value obtained will depend on the applied corrections. However, the value determined will depend on the applied clear water in the fish. The experiments were performed in 6-hour intervals. After a priming dose of 0.2 mc 32P followed by a CI containing 0.2 mc 32P Na, 32P Na was always above 95%. In Agar- and Tc-99m-AF experiments labeled and unlabeled AF had been shown to be a good parameter for distinguishing between normal subjects and those who have become deficient as result of, e.g., surgery of the digestive tract. However, the long observation time (150 d) makes this test unsuitable for clinical use. Measurements during the first 10 days p.d. of the total body retention of 65Zn, also of its plasma-clearance and urinary excretion, although providing information about the loss and shift to other compartments of zinc, did not inform about the zinc status. During this same period, measurements of 65Zn retention in the forearm correlated well with the biol. t½ of the 65Zn as calculated from its total body retention, although the latter required a much longer observation period. Indicators are that for measurement of 65Zn in the forearm an observation period of 3 days may suffice, which would make it feasible to replace the 65Zn (phys. t½=245 d) by 69mZn (phys. t½=13.9 h). Measurements of 69mZn in the forearm may be a suitable parameter for the zinc status. 65Zn has also been shown to be a parameter of choice for the measurement of the plasma-65Zn after an oral dose of 55 mg Zn (containing 10 pCi 65Zn). Such tests have proved their value for evaluation of normal and deficient subjects. The results obtained from the above experiment imply that, when considering the cumulative total zinc entering the blood (v), the specific activity of the Zn is measured.

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