DETERMINATION OF MINERALS IN A FORTIFIER MIXTURE BASED ON SWINE LIVER

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Data from the World Health Organization show that 2.15 million children in preschool age are at risk of iron deficiency, being a problem of great importance. A strategy for preventing and combating iron deficiency anemia is the use of fortifier mixtures (FM) which allow different additions of iron and other nutrients equally important for reverting the disease. The objective of this study was to determine the minerals present in a FM-based lyophilized swine liver developed to be used in school meals. Calcium, copper, iron, phosphorus, magnesium, sodium and zinc were determined by using the technique of plasma emission spectrometry, according to AOAC procedures. The average results (standard deviation) of the sample expressed in mg/100 g for calcium, copper, iron, phosphorus, magnesium, sodium and zinc were: 109 (1), 1.04 (0.01), 23.8 (0.4), 858 (13), 48.8 (0.2), 909 (11), 9.97 (0.06), respectively. The contents of calcium, phosphorus and zinc appeared to be high when compared to the amount in pork meat. The high iron content (23.8 mg/100 g) found in FM is due to the fact that it is composed of large amounts of swine liver (more than 50% of the formulation, wet basis). The use of fortifier mixture in powder form does not depend on the cooking or heating and can be easily added to soups, creams, and particularly meats and cooked beans. These features make the FM an excellent food fortifier to be used in school meals.