

EVALUATION OF CL, K, Mg, Mn AND Na IN FOOD GROUPS OF SÃO PAULO TOTAL DIET

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The objective of this study was to evaluate dietary intake of Cl, K, Mg, Mn and Na to Total Diet Study (TDS). This TDS is an approach based on the evaluation of food samples representing foods consumed by the São Paulo state population. The combination of the data obtained by analysis in laboratory and individual daily consumption data by national surveys result in an estimate of the dietary intakes of these elements. Two Brazilian Total Diet Study experiences to provide measurement of elements by INAA have been developed by Neutron Activation Laboratory at the IPEN/CNEN SP. As of present there are no previous experiences in Brazil using Total Diet. Compared to the 1st Brazilian TDS¹ performed in 2005-2009, the current 2nd TDS has shown more accurate results. While the first one was concerned to foods which were acquired by the population for household consumption, the second TDS includes foods consumed both inside and outside of the household resulting in a total daily consumption of the population. The source of data for the 2nd TDS was based on the Household Budget Survey (POF 2008-2009) conducted by the Brazilian Institute of Geography and Statistics. The foods with similar nutritional composition were grouped, resulting in 19 food groups. The concentrations of Cl, K, Mg, Mn and Na were determined in the 12 food groups from the List Food of the 2nd TDS by Instrumental Neutron Activation Analysis. These elements were determined after irradiations for 20 seconds at a neutron flux of 10^{12} n cm⁻² s⁻¹ in the pneumatic system of the IEA-R1 nuclear research reactor of the IPEN-CNEN/SP. The results showed that the dietary intake values of these elements were comparable to the first TDS.

REFERENCES

1) R.P.Aveglano, V.A.Maihara, F.F.da Silva,J. Food.Compos.Analys. 24 (2011) 1009.