

## **P68: IODINE CONTENT IN FOOD: COMPARISON BETWEEN AZORES AND CONTINENTAL PORTUGAL**

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Iodine is an essential trace element for the synthesis of thyroid hormones, important for pregnant women and children. Clinical studies in Portugal have demonstrated the existence of a generalized deficiency in iodine of pregnant women and with school-age children particular severity in the archipelago of Azores [1,2]. Foods are the main iodine source [3]. Thus, in this work we report the characterization of iodine in foods produced and consumed by population from Azores and continental Portugal.

Samples of dairy products, fruits and vegetables from both regions were selected. In total, 110 samples were analyzed in triplicate. Iodine contents were determined using inductively coupled plasma-mass spectrometry (ICP-MS) after alkaline digestion assisted by microwave.

Milk had higher iodine content in continental Portugal (255µg/l) than in Azores (133µg/l). For cheese, it was also found in continental Portugal that the highest iodine content was 275µg/kg when compared to the Azores, 117µg/kg. Vegetables collected in the Azores had higher iodine contents than those from continental Portugal, with the exception of carrots. For all fruits values below the limit of quantification were found.

Results showed that dairy products analyzed are a good source of iodine and should be part of the diets of deficient populations. Proficiency test schemes and certified reference materials were important to guarantee the accuracy of the laboratory results. Analytical data are also in line with recent studies, evidencing that foods rich in iodine represent a clear benefit in the daily intake of this micronutrient, for the general population.

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### **References:**

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