· 食品放射性监测 ·

福州市居民膳食中总 α 和总 β 放射性水平调查

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【摘要】 **目的** 调查福州市居民膳食中不同食品组的食品总 α 和总 β 放射性水平。**方法** 依据总膳食研究调查的食品清单，于福州大中型超市采集 11 类（谷类、薯类、豆类、肉类、蛋类、乳类、水产类、蔬菜类、水果类、酒类和糖类）61 种日常食用食品样品，样品取可食部位进行灰化后，采用低本底 α、β 计数器测定其总 α 和总 β 放射性水平。**结果** 谷类、薯类、豆类、肉类、蛋类、乳类、水产类、蔬菜类、水果类、酒类和糖类的总 α 放射性平均值分别为（0.43±0.55）、（1.30±0.65）、（0.79±0.62）、（0.17±0.14）、（1.10±0.64）、（0.02±0.01）、（5.70±6.02）、（0.45±0.46）、（0.27±0.25）、（0.06±0.02）、（0.54±0.28）Bq/kg；总 β 放射性平均值分别为（33.40±10.82）、（87.00±0.10）、（137.34±179.30）、（56.97±24.55）、（80.50±32.44）、（24.40±9.84）、（140.50±101.32）、（46.99±22.80）、（43.74±13.46）、（7.59±0.06）、（1.12±0.02）Bq/kg。**结论** 福州市居民膳食中总 α 和总 β 放射性水平仍处在历年调查区间范围内，未发现食品总放射性水平负担增加。

【关键词】 总 α； 总 β； 放射性； 食品； 膳食
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Investigation of gross alpha and gross beta radioactivity levels in diet of residents in Fuzhou city

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【**Abstract**】 **Objective** To investigate the levels of gross alpha and gross beta radioactivity in different food groups in the diet of Fuzhou residents. **Methods** According to the food lists surveyed in the total diet study, 61 samples were collected from large and medium-sized supermarkets in Fuzhou, encompassing 11 categories of daily edible foods (cereals, potatoes, legumes, meat, eggs, milk, aquatic products, vegetables, fruits, alcohol and sugars). The samples were taken from edible parts and then ashed, and the gross alpha and gross beta radioactivity were measured by using low background alpha, beta counters. **Results** The average gross alpha activity concentrations were cereals 0.43 ± 0.55, potatoes 1.30 ± 0.65, legumes 0.79 ± 0.62, meat 0.17 ± 0.14, eggs 1.10 ± 0.64, milk 0.02 ± 0.01, aquatic products 5.70 ± 6.02, vegetables 0.45 ± 0.46, fruits 0.27 ± 0.25, alcohol 0.06 ± 0.02, and sugars (0.54 ± 0.28) Bq/kg. The average gross beta activity concentrations were cereals 33.40 ± 10.82, potatoes 87.00 ± 0.10, legumes 137.34 ± 179.30, meat 56.97 ± 24.55, eggs 80.50 ± 32.44, milk 24.40 ± 9.84, aquatic products 140.50 ± 101.32, vegetables 46.99 ± 22.80, fruits 43.74 ± 13.46, alcohol 7.59 ± 0.06 and sugars (1.12 ± 0.02) Bq/kg. **Conclusions** The radioactivity levels of gross

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