

Comparison of the declared and analysed nutritional composition between branded and private-label meat products sold in Greek supermarkets

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Introduction: Private label food products are increasingly popular among consumers worldwide. This trend is primarily because private label products are usually cheaper than similar branded products. However, consumers believe private label food products are inferior to their branded equivalents. Data from various studies have shown that the low-cost private label food products have an equivalent nutrient composition compared to the high-cost branded ones. In this respect, private label products might be more cost-effective than branded ones concerning the macro- and micronutrient contents. Additionally, the contents of fat, saturated fatty acids, and sodium in meat products affect their nutritional quality. Finally, the cheaper private label products affect consumers' choices over food purchases and subsequent nutrient intake. Regarding Greece, the number of private label food products is constantly increasing. However, the number of studies comparing the nutritional quality of branded versus private-label meat products. Nowadays, as consumers face greater financial difficulties with household food budget spending, determination of the differences in the nutritional profile between private label and branded processed meat products has gained particular interest.

Aim of the Study: To compare the nutrient content of branded versus private-label processed meat products available in Greek supermarkets.

Materials and Methods: Meat products (n = 34) such as mini parizers, Frankfurter-type sausages, luncheon meat, and corned beef were purchased from four major supermarket retailers located in Northern Greece. If the product's brand was a supermarket's exclusive brand name, it was considered as a private label product. The nutritional composition was determined according to the recommended standard methods described in AOAC (2003). Moisture, ash, protein, fat, and sodium chloride contents were determined according to the 950.46, 920.153, 928.08, 991.36, and 935.47 methods, respectively. The content of carbohydrate was calculated by subtracting the sum percentage of moisture, ash, protein, and fat from 100. Declared values were obtained from the manufacturers' label, and for salt, if the values were reported as sodium, these were multiplied by 2.5 to obtain the corresponding sodium chloride content. Data were analysed using descriptive statistics, and differences in mean nutrient content between branded and private-label products were determined and compared using unpaired t-tests. Statistical significance was defined as two-sided $\alpha = 0.05$.

Results and Discussion: Branded products accounted for 59 % (n=20) and private label products accounted for 41 % (n=14) of all examined products. The declared composition (g/100g) was as follows; A) branded products; protein 14, fat 16.18, carbohydrate 4.52, sodium chloride 2.19 and B) private label products protein 12.41, fat 17.01, carbohydrate 5.68, sodium chloride 2.43. The analysed composition (g/100g) was as follows; A) branded products; protein 14.26, fat 15.40, carbohydrate 5.77, sodium chloride 1.88 and B) private label products protein 11.72, fat 16.32, carbohydrate 6.47, sodium chloride 2.03. It was observed that branded products had a higher protein content and lower contents for fat, carbohydrate, and sodium chloride in both types of nutritional composition, i.e., declared and analysed. However, a statistically significant difference ($P \leq 0.05$) between the branded and the private-label products was observed only in the analysed protein content. Cleanthous et al. (2011) did not report differences in the declared fat and sodium content between branded and private-label processed meat products sold in Australian supermarkets. Additionally, Khalatbari-Soltani and Marques-Vidal (2016) reported that the macronutrient content did not differ between branded and private-label processed meat products in Switzerland. In the previously reported studies, nutrient content was derived from food composition databases or the product's nutritional label.

Conclusions: The present work compared the nutritional composition, either declared or analysed, of branded and private-label processed meat products sold in Greek supermarkets. The results showed that there were no nutritional differences between branded and private-label processed meat products and that private-label products are not nutritionally inferior to branded products. However, this is a small number of samples, and a study with a greater number of samples is required to fully comprehend the differences in the nutritional profile between branded and private label products. Furthermore, differences in the content of saturated fatty acids and the serving size between the branded and private label products should also be examined as they are related to healthy food consumption.

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Key words: Processed meat products, Nutritional label, Branded, Private-label