

Abstract

Assessment of the Salt Content in Breads in Slovenia [†]

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Abstract: Background and objectives: Reducing salt intake is among the most cost-effective measures for reducing the burden of non-communicable diseases. To effectively reduce intake, salt reduction strategies often concentrate on food categories that contribute the most to overall salt intake. In Slovenia, bread is recognized as one of the contributors to salt intake and efforts are being made to reduce its salt content. Therefore, the objective of this study was to assess the current salt content of bread sold in large retail shops and smaller bakeries in Slovenia. Methods: The study was conducted in November/December 2022. A total of 178 bread samples were purchased across 11 statistical regions of Slovenia, both in large retail shops and smaller bakeries. The sampling in large retail shops covered all main bread categories and considered statistical consumption data. The final sample included 60 white wheat breads, of which 28 were purchased in large retail shops. Other categories included mixed wheat (N = 33), dark wheat (N = 16), half-white wheat (N = 12), and rye bread (N = 3). The sampling in smaller bakeries was limited only to white and wholegrain bread, where available. Sodium content was determined by inductive coupled plasma mass spectroscopy (ICP-MS). Salt content was calculated by multiplying it by 2.54, assuming that all sodium corresponded to sodium chloride (NaCl). Results: The average salt content of white wheat bread sold in large retail shops was 1.21 ± 0.16 g NaCl/100 g. The average salt content of dark wheat, half-white, and mixed bread was similar (1.15 ± 0.14 g NaCl/100 g, 1.23 ± 0.13 g NaCl/100 g, and 1.22 ± 0.24 g NaCl/100 g, respectively). On the other hand, wheat bread from smaller bakeries had an average salt content of 1.34 ± 0.21 g NaCl/100 g (range 0.85–2.06 g/100 g). Discussion: The results suggest a slight reduction in the average salt content of mixed wheat, dark wheat, half-white wheat, and rye bread from large retail shops, compared to a study conducted in 2010. These findings emphasize the importance of ongoing efforts to improve the composition of bread and the need for continued focus on salt reduction strategies.

Keywords: bread; salt content; ICP-MS

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