**Is Vitamin-Enriched Salt Feasible?**

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| **Abstract** This paper explores the scientific and technical feasibility of incorporating vitamins into salt, a common food product consumed globally. It discusses the potential challenges associated with vitamin stability, bioavailability, taste compatibility, and consumer acceptance when vitamins are added to salt. The article also addresses the nutritional benefits and public health impact of vitamin-enriched salt, particularly in regions where vitamin deficiencies are prevalent. Despite the potential advantages, several technical limitations, including the sensitivity of certain vitamins to light, heat, and moisture, as well as the interaction of vitamins with the salt matrix, are examined. For example, water-soluble vitamins like vitamin C are highly sensitive to external factors and may degrade quickly when exposed to salt for extended periods. The paper further explores potential solutions to these challenges, such as the use of encapsulation technologies like microencapsulation, which can enhance the stability of vitamins and protect them from degradation. The potential benefits of vitamin-enriched salt include improving the intake of essential vitamins in populations with limited access to a diverse diet, providing a cost-effective way to address vitamin deficiencies, and enhancing public health outcomes related to immune function and bone health. However, the risks associated with excessive intake of certain vitamins, particularly fat-soluble vitamins, are also discussed, highlighting the importance of proper dosage control in the production of vitamin-enriched salts. The paper concludes that while vitamin-enriched salt offers promising potential as a tool for addressing vitamin deficiencies, further research and development are needed to address the technical challenges of stability, bioavailability, and taste compatibility. Additionally, more studies are required to ensure the safety and effectiveness of such products, with a focus on consumer acceptance and regulatory guidelines for vitamin fortification in salt. The future of vitamin-enriched salt lies in the development of advanced delivery systems and the refinement of production techniques to ensure both efficacy and safety in its use as a public health tool.**References:** [1] Zimmermann, M. B., Wegmueller, R., Zeder, C., Chaouki, N., Biebinger, R., Hurrell, R. F., & Windhab, E. (2004). Triple fortification of salt with microcapsules of iodine, iron, and vitamin A. The American journal of clinical nutrition, 80(5), 1283-1290.[2] Rutkowski, K., & Diosady, L. L. (2007). Vitamin A stability in triple fortified salt. Food research international, 40(1), 147-152. [3] Vinodkumar, M., & Rajagopalan, S. (2009). Multiple micronutrient fortification of salt. European journal of clinical nutrition, 63(3), 437-445.[4] Mannar, M. V. (2018). Salt. In Food fortification in a globalized world (pp. 143-151). Academic Press.[5] Modupe, O., & Diosady, L. L. (2021). Quadruple fortification of salt for the delivery of iron, iodine, folic acid, and vitamin B12 to vulnerable populations. Journal of Food Engineering, 300, 110525. |

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