



CHEWABLE TRYPTOPHAN SUPPLEMENTS FROM BANANA PEEL: CONSUMER PERCEPTION AS A VALIDATION STRATEGY

Camilly C. S. da Luz¹, Maique A. Mello¹, Gabriel S. Jacinto^{1*}.

¹*Universidade do Vale do Itajaí, Brasil. *gabrielserpa@univali.br*

INTRODUCTION

The utilization of food waste, such as banana peel, has emerged as a sustainable and innovative alternative for the development of new products. Accounting for approximately 30% of the fruit's total weight, banana peel is often discarded despite being rich in bioactive compounds. Among these, tryptophan stands out as an essential amino acid linked to mood and sleep regulation. This project aimed to investigate public acceptance of chewable supplements formulated with tryptophan extracted from banana peel, exploring the potential consumer interest in natural and sustainable products.

MATERIAL AND METHODS

To assess public acceptance of chewable supplements produced with tryptophan extracted from banana peel, a quantitative, exploratory opinion survey was conducted. Data collection was carried out through a structured questionnaire created using the Google Forms platform. The form was made available via an open link and widely disseminated through social media and various online groups, aiming to reach a diverse audience in terms of age, consumption habits, and concerns related to health, well-being, and sustainability. One of the main objectives of the study was to understand whether the public would show interest in a product developed from food waste.

RESULTS

The number of people who responded to the form was 108. The survey results showed that 88.3% of participants expressed interest in consuming a natural supplement containing tryptophan extracted from banana peel, even among those who reported no sleep difficulties. Furthermore, 83% stated that they do not use sleep-inducing medications, reinforcing a preference for natural alternatives. Regarding sleep quality, 47.9% reported experiencing sleep difficulties, while 52.1% indicated that they sleep normally.

CONCLUSIONS

The proposal to develop a chewable supplement based on tryptophan extracted from banana peel received excellent acceptance among survey participants, including those without reported sleep difficulties. The high acceptance rate, even among individuals who do not experience sleep issues, suggests that the public values functional supplements as part of a preventive health and wellness routine. These findings highlight the importance of investing in innovations aimed at accessible, natural, and conscious supplementation.

ACKNOWLEDGMENTS

Universidade do Vale do Itajaí.

