



INVESTIGATION OF FLAVOUR PERMANENCE OF STRAWBERRY AND WATERMELON FLAVOURED CHEWING GUMS BY USING RETRONASAL AROMA TRAPPING DEVICE AND SENSORY ANALYSIS TECHNIQUES

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ABSTRACT

Combining in vivo instrumental analysis with sensory evaluation techniques to analyze the release of volatile components from the gum matrix is gaining importance due to the flavour expectations of consumers. Besides consumers' preferences and quality of flavourings determine the market value of chewing gums. In this study, strawberry and watermelon flavoured chewing gums were prepared and evaluated with both sensory evaluation and analytical techniques by using retronasal aroma trapping device and dynamic headspace analysis - DHA-GC/MS. Ethyl hexanoate and isoamyl acetate were chosen as flavour compounds for strawberry and watermelon flavoured gums to monitor in the study. The in vivo experiment with retronasal aroma trapping device showed that selected compounds were quite intense in the first 5 min of breath, and they were also detected in the 45th min of chewing. The flavour stability of the chewing gums was also monitored for 3 months. According to all sensory and instrumental analyzes, watermelon flavour was perceived as watermelon taste both at the 45th min and at the end of shelf life (equal to 12 months).

Keywords: Flavoured chewing gum, flavour permanence, retronasal aroma trapping device, sensory evaluation technics

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