

Abstract

Texture, often overshadowed by flavor, is a critical attribute in cereal bar development. This research explores the texture preferences of sugar-substituted cereal bars, focusing on individual characteristics such as age, gender, and masticatory performance. The study associates and correlates these characteristics with texture preference to provide recommendations for optimizing the texture of sugar-substituted bars. Descriptive profiling, hedonic testing, and masticatory performance assessments were conducted. Weak associations were found between age, gender, and texture preference, while a weak negative correlation was observed between masticatory performance and sorbitol firmness and moistness preference. Among the samples, erythritol cereal bars were least preferred, while sorbitol bars were highly preferred. Erythritol exhibited extreme texture attribute intensity, resulting in low liking rates. It is recommended to avoid using erythritol as a sole sugar substitute, but exploring combinations with other sweeteners may offer possibilities for desired texture attributes. This research enhances understanding of texture preferences and guides the development of appealing sugar-substituted cereal bars.

Keywords: Cereal Bar, Sugar Substitute, Polyols, Texture Preference