

- **Sucrose-replacement by rebaudioside a in a model beverage**

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Abstract:

Rebaudioside A (RA), a component of *Stevia rebaudiana*, is a non-caloric sweetener of natural origin, suitable to meet consumers' demand for sweet taste, but undesirable flavors were reported at high concentrations. Aim of this study was to create a model beverage (ice-tea) in which sucrose was replaced increasingly by RA to identify optimal sensory profile for consumer acceptance. Samples with 20 % and 40 % sucrose replacement by RA, respectively, showed very similar sensory profiles but were significantly higher in some flavor attributes, such as artificial sweetness, licorice-like and metallic, as well as in sweet and bitter aftertaste ($p < 0.05$) compared to the reference ice-tea. In both hedonic tests, preference and acceptance samples with RA have been judged as comparable to the reference despite perception of some undesirable notes. In view of the results of our study it can be stated that a replacement of 20 % or 40 % sucrose by RA in an ice-tea is achievable.

Link: https://www.researchgate.net/publication/281587484_Sucrose-replacement_by_rebaudioside_a_in_a_model_beverage