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INFLUENCE OF XANTHAN GUM ON CLOUD STABILITY OF BETA VULGARIS READY TO SERVE BEVERAGES

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ABSTRACT

The fruits and vegetables are rich in functional components like minerals, vitamins, dietary fiber and antioxidants. Beta vulgaris is one of the most powerful vegetable in terms of its phenolic content and antioxidants. The present study aimed to formulate Ready to Serve Beverages from Beta vulgaris which would be a great source of energy with more health benefits. RTS beta vulgaris beverages were optimized using BBD in Response Surface Methodology (RSM) by varying the parameters such as pulp extract, water and sugar. The correlation coefficient (R^2) for the responses such as pH, titratable acidity, TSS, viscosity and sensory acceptability was found. Biochemical analyses like carbohydrates, proteins, betalains, total polyphenolic content and flavanoids were done for the optimized sample. The shelf life of the sample was evaluated under refrigerated condition. The cloud stability of the juice was attained by the addition of xanthan gum at three different levels (0.1, 0.15, 0.2 w/v %). The influence of the gum on the pH, viscosity, turbidity, total soluble solids (TSS), sedimentation index and sensory analysis were analyzed. The effect of xanthan gum on the total phenolic content and betalain content were also evaluated for the samples stored at refrigerated condition.

KEY WORDS: RTS beverage, RSM, Xanthan Gum, Cloud Stability.