

## OPTIMIZATION OF A MIXED JUICE FROM AMAZON FRUITS

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Production trends in the food sector are dictated by the market and the social behavior of the consumers. Currently, the search for healthy products has grown and tropical fruits are being increasingly used in formulations aiming innovation. Mixed juices are intended to improve the sensory characteristics and enhance the nutritional value of the product. The Brazilian Amazon fruits can easily serve for this purpose. After preliminary studies, three fruits (*cupuaçu*, *acerola* and *açaí*) were chosen and a simplex-centroid experimental design was applied to evaluate the appropriate concentration of the components in the mixture. It was realized ten assays and the global acceptance (50 consumers) was the evaluated attribute. It was tested a linear, quadratic and cubic models, the parameters  $R^2$  0.726, 0.850 and 0.948 and the relations  $F_{\text{calculated}}/F_{\text{tabulated}}$  1.96, 0.96 and 1.02 were obtained, respectively. The cubic model was the closest to an adjustment, but the low ratio obtained for regression, did not allowed the model be considered predictive. However, trend graphs (fitted and contour surface) indicated that consumer acceptance reaches good values (above 77%) when there is a higher concentration of *açaí*. The *acerola* pulp has a negative effect, contributing to decrease the acceptance of the mixed drink. Pareto's chart confirms the negative effect of *acerola-açaí* and *acerola-cupuaçu* for the acceptance, but there was not a significant difference ( $p \leq 0.05$ ) in the parameters observed. The final results indicated that in a 50% concentration of the three fruits mixed, the *acerola* must be lower than 9% in the formulation.