**Formulation of a drink based on quinoa and chía, with good mouth filling**

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RESUMEN

Current preferences for healthy consumption involve foods that exclude those of animal origin, so vegetable drinks that mimic those of dairy origin are a growing need. In the present work a vegetable drink based on quinoa and chia, two well considered ancestral seeds nowadays, was developed. The target was a liquid food containing high-quality proteins and fatty acids from quinoa and chia, respectively. After a two-level screening test, a mixture made of 17.5% of whole quinoa flour and 2.5% of chia expeller was selected. Both raw materials were dispersed in water, ground in a colloid mill and enzymatically treated, this last due to the high viscosity that quinoa starch confers. The concentration and time of application of three enzymes (fungal and thermostable α-amylases and a glucoamylase) was evaluated using a Box-Behnken response surface design at three levels. Response variables were fluidity (funnel viscosity test) and sedimentation (centrifugation). The statistical analysis showed a strong positive effect of thermostable α-amylase, a significant interaction with glucoamylase and a negligible effect from fungal amylase. The optimal formulation was obtained under the next conditions: 1.7% thermostable α-amylase and 0.6% glucoamylase for 45 min at 60 °C. The developed vegetable drink (optimal formulation) presented a viscosity similar to a commercial drinkable yogurt and negligible sedimentation, a mean particle size of 30.18 μm (φ: 1.4) and an average color (CieLab) L: 80.69, a: 1.87 and b: 10.83. The product presented the following composition: 16.2% carbohydrates, 2.90% proteins, 1.61% lipids and 0.97% ashes.

Palabras Clave: drink, health, vegetable, protein, lipids