

ABSTRACT

The purpose of this research was to determine the optimal formulation in the production of red dragon fruit jelly powder made from raw and added material, such as (dragon fruit skin, flesh of dragon fruit, carrageenan, citric acid, albumin) and to know red dragon fruit jelly powder characteristic.

The research was divided into two steps. Preliminary research was calculated the sugar content in the raw material. In primary research was obtained optimal formulation through Design Expert program.

Optimal formulation of red dragon fruit jelly powder was fruit skin 24.845%; flesh of dragon fruit 33.430%; carrageenan 4.234%; 9.183% albumin, so the program Design Expert D-Optimal method can be used to determine the optimal formulation of a product.

Optimal formulation which was predicted by the program Design Expert was moisture content of 4.989%; 4.488% crude content; pH 5,338; colour 4,442; 4,089 odor; sense 3.829 and texture 3.738. Optimal formulation of red dragon fruit jelly powder contain a disaccharide sugar content of 21.82% and 33.72% total sugar content, and antioxidant activity of 3218.43 ppm.

Keywords: dragon fruit, Design Expert program, formulation.