

ABSTRACT

The aim of this research was to determine optimal formulation of black mulberry and cocoa powder jam sheet with raw and additional material (black mulberry pure and cocoa powder) and also to know the characteristic of black mulberry and cocoa powder sheet jam. This research consists of two steps: there was preliminary research to know the analysis of raw material results which were chosen by pH, fat content, and total sugar content. Then, main research would determine the optimal formulation of black mulberry and cocoa powder jam sheet with raw and additional material (black mulberry pure and cocoa powder) using design expert 7.0 program d-optimal method. The results of responses for selected formulation are pH 3.55; moisture content 27.57%; antioxidant activity 971,1549 ppm; total sugar content 48.6641%; texture analysis obtained gel strength 4.50 gram force; organoleptic score obtained colour score 5; aroma score 4.8 and taste score 4.93. Based on optimal formulation which is offered by program and compared with laboratory analysis, so it could be evidenced by desirability value with score 0.622, so the difference between the analysis and the program didn't get too far.

Keywords: black mulberry, cocoa powder, jam sheet, optimal formulation.