

Optimasi Formulasi Fruit Leather Buah Mangga Arum Manis

Menggunakan Respon Surface Methodology

Optimisation of Arum Manis Mango Fruit Leather Formulation Using Design

Expert RSM - CCD Method

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ABSTRACT

The mango (*mangifera indica Linn*) is a sweet tropical fruit that grows intermittently. It's sometimes abundant and rare, making the price unstable. Even when it is plentiful, much of it is overripe and wasted. This research uses overripe mangoes as the main ingredient in the production of Crunchy mango to increase its shelf life without reducing the nutritional value contained therein. Its formulation was optimized using Response Surface Methodology-central composite design (RSMCCD) design software to determine the model for the following manufacturing process. The solution obtained in the analysis carried out by the design expert was with a puree concentration of 79.246%, sugar 18.207%, and carrageenan 0.600% with a diserbility value of 0.759. The product accuracy water content value was 99%, ash content value was 92.4%, water activity (Aw) value was 91.1%, texture value was 99%, sugar value was 48.61%, and vitamin C value was 0.35mg/100g. Using overripe mangoes as raw material causes the sugar content to be high and the vitamin C (ascorbic acid) content to be low. However, this product has the potential to be produced into ready-to-eat processed mango products, considering that Indonesia is the fourth mango-producing country in the world.

Keywords : *Ascorbic acid, Fruit leather, Functional food, Mango*