

ABSTRAK

Nama : Riesma Anggita Rinaldi
Program Studi : Teknologi Industri Pertanian
Judul : Pendugaan Umur Simpan Selai Campuran Buah Naga (*Hylocereus polyrhizus*) Dan Labu Siam (*Sechium edule*)
Dosen Pembimbing : 1. Ir. Darti Nurani, M.Si
2. Dra. Setiarti Sukotjo, M.Sc

*Selai campuran buah naga (*Hylocereus polyrhizus*) dan labu siam (*Sechium edule*) termasuk dalam golongan makanan semi basah dengan tekstur yang lunak dan plastis. Pengolahan selai campuran buah naga dan labu siam sangat prospektif untuk dikembangkan. Permasalahannya, belum ada informasi tentang umur simpan selai campuran buah naga dan labu siam. Tujuan penelitian ini adalah untuk mengetahui umur simpannya. Rancangan percobaan dalam penelitian ini adalah Rancangan Acak Kelompok (RAK) yang terdiri atas dua faktor. Faktor A adalah suhu penyimpanan yang terdiri atas 3 taraf, yaitu $a_1 = 15^{\circ}\text{C}$, $a_2 = 25^{\circ}\text{C}$, dan $a_3 = 35^{\circ}\text{C}$. Faktor B adalah waktu penyimpanan yang terdiri atas 5 taraf, yaitu $b_1 = 0$ hari, $b_2 = 7$ hari, $b_3 = 14$ hari, $b_4 = 21$ hari, dan $b_5 = 28$ hari. Pengulangan penelitian dilakukan dua kali. Analisis produk meliputi analisis kualitatif berupa pengamatan warna, aroma dan tekstur; analisis pH, total asam tertitrasi, angka lempeng total serta total kapang dan khamir. Metode pendugaan umur simpan yang digunakan dalam penelitian ini adalah metode Accelerated Storage Studies (ASS) dengan pendekatan arhenius melalui ordo nol. Berdasarkan hasil analisis pendugaan umur simpan, diperoleh umur simpan selai campuran buah naga dan labu siam adalah 20,49 hari pada suhu 15°C . Namun, produk tersebut masih memiliki warna, aroma, tekstur serta hasil analisis mikroba dan hasil analisis kimia yang tidak jauh berbeda sampai penyimpanan 28 hari. Produk tersebut memiliki warna ungu agak tua, beraroma harum buah, tidak berair dan bertekstur mudah dioles, total kapang khamir $4,30 \times 10^2$ koloni/g, angka lempeng total $1,75 \times 10^4$ koloni/g, nilai pH 4,06 dan total asam tertitrasi 25,09%.*

Kata Kunci : Buah naga, labu siam, selai, umur simpan

ABSTRACT

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Program Studi : Teknologi Industri Pertanian
Judul : *Estimated Shelf Life Of Mixed Jam From Dragon Fruit (Hylocereus polyrhizus) And Chayote (Sechium edule)*
Dosen Pembimbing : 1. Ir. Darti Nurani, M.Si
2. Dra. Setiarti Sukotjo, M.Sc

Mixed jam of dragon fruit (Hylocereus polyrhizus) and chayote (Sechium edule) is included in the semi-wet food category with a soft and plastic texture. The production of mixed dragon fruit and chayote jam is very prospective to be developed. The problem is, there is no information about the shelf life of mixed dragon fruit and chayote jam. The purpose of this research is to know its shelf life. The experimental design in this study was a Randomized Block Design (RBD) which consisted of two factors. Factor A is the storage temperature which consists of 3 levels, namely $a_1 = 15^{\circ}\text{C}$, $a_2 = 25^{\circ}\text{C}$, and $a_3 = 35^{\circ}\text{C}$. Factor B is storage time which consists of 5 levels, namely $b_1 = 0$ days, $b_2 = 7$ days, $b_3 = 14$ days, $b_4 = 21$ days, and $b_5 = 28$ days. The research was repeated twice. Product analysis includes qualitative analysis in the form of observations of color, aroma and texture; And quantitative analysis include pH, total titrated acid, total plate number and total mold and yeast. The method of estimating the shelf life used in this study is the Accelerated Storage Studies (ASS) method with the Arrhenius approach through zero order. Based on the results of the analysis of the estimated shelf life, the shelf life of a mixture of dragon fruit and chayote jam is 20.49 days at a temperature of 15°C . However, the product still has color, aroma, texture and the results of microbial analysis and chemical analysis results are not much different until 28 days of storage. The product has slightly dark purple color, smells fruity, with less water content and has a texture that is easy to smear, total yeast mold is $4,30 \times 10^2$ colonies/g, total plate count is $1,75 \times 10^4$ colonies/g, pH value is 4.06 and total titrated acid is 25,09%.

Keywords : Dragon fruit, chayote, jam, shelf life