

**PENGARUH PERENDAMAN LARUTAN NATRIUM METABISULFIT
($\text{Na}_2\text{S}_2\text{O}_5$) BERBAGAI KONSENTRASI TERHADAP TINGKAT
KECERAHAN DAN KARAKTERISTIK FISIKOKIMIA TEPUNG APEL
HIJAU GRANNY SMITH**

INTISARI

Oleh:

MARCELLO VINCENT

19/444193/TP/12570

Apel merupakan buah yang memiliki umur simpan yang pendek yang ditandai dengan terjadinya perubahan penampilan, warna, tekstur, rasa, dan aroma. Untuk mengatasi hal tersebut, buah apel diolah menjadi tepung apel yang memiliki daya simpan yang lebih panjang. Namun terdapat kekurangan pada tepung apel yaitu terjadinya pencoklatan yang mengurangi cita rasa pada tepung apel. Untuk mencegah terjadinya pencoklatan, maka dilakukan *pre-treatment* berupa perendaman dalam larutan Natrium Metabisulfit.

Dalam penelitian ini, buah apel direndam dalam larutan Natrium Metabisulfit dengan konsentrasi 0, 500 ppm, 750 ppm, dan 1000 ppm lalu dikeringkan dengan suhu 60°C selama 24 jam, digiling, dan diayak. Kemudian dilakukan analisis warna dengan *Chroma Meter* Konica Minolta, rendemen dengan metode gravimetri, daya serap air, densitas kamba, kadar air dengan *Moisture Analyzer*, kadar abu, kadar gula reduksi, dan total dengan metode DNS, dan kadar serat.

Dari hasil penelitian didapatkan bahwa konsentrasi Natrium Metabisulfit meningkatkan tingkat kecerahan, daya serap air, kadar gula reduksi dan gula total, serta menurunkan rendemen, densitas kamba, kadar air, dan kadar serat kasar. Rata-rata rendemen sebesar 8,85-10,35%; densitas 0,25-0,31 (g/mL); daya serap air 138,29-197,23%; tingkat kecerahan 66,26-74,98; tingkat kemerahan 1,54-2,67; dan tingkat kekuningan 22,11-24,47. Pada karakteristik kimia tepung apel didapatkan rata-rata kadar air sebesar 3,78-5,34%; kadar abu 2,31-2,69%; kadar serat kasar 3,32-7,41%; kadar gula reduksi 50,67-60,88%; dan kadar gula total 51,42-62,84%. Dari empat perlakuan yang dilakukan, perlakuan yang terbaik untuk tepung apel *Granny Smith* berdasarkan metode de garmo adalah larutan Natrium Metabisulfit konsentrasi 1000 ppm.

Kata kunci: Tepung apel, Natrium Metabisulfit, tingkat kecerahan, Apel *Granny Smith*.

**EFFECT OF IMMERSION IN NATRIUM METABISULPHITE ($\text{Na}_2\text{S}_2\text{O}_5$)
WITH VARIOUS CONCENTRATION ON BRIGHTNESS LEVEL AND
PHYSICOCHEMICAL CHARACTERISTICS OF GREEN GRANNY
SMITH APPLE FLOUR**

ABSTRACT

By:

MARCELLO VINCENT

19/444193/TP/12570

Apples have a short shelf life which is characterized by changes in appearance, color, texture, taste, and aroma. To overcome this, apples are processed into apple flour which has a longer shelf life. However, there are drawbacks to apple flour, namely browning which reduces the taste of apple flour. To prevent browning, pre-treatment was carried out in the form of immersion in a solution of Natrium Metabisulfite.

In this study, apples were soaked in a solution of Natrium Metabisulfite with a concentration of 0, 500 ppm, 750 ppm, and 1000 ppm and then dried at 60°C for 24 hours, ground, and sieved. Then performed color analysis with *Chroma Meter* Konica Minolta, yield with the gravimetric method, water absorption, bulk density, moisture content with the Moisture Analyzer, ash content, reducing sugar content, and total sugar content with the DNS method, and fiber content.

From the results, it was found that the concentration of Natrium Metabisulfite increased the brightness level, water absorption, reducing sugar and total sugar content, and reduced the average yield, bulk density, moisture content, and crude fiber content. The average yield is 8,85-10,35%; bulk density 0,25-0,31 (g/mL); water absorption 138,29-197,23%; brightness level 66,26-74,98; redness level -1,54-2,67; and yellowness level 22,11-24,47. On the chemical properties of apple flour, the average of moisture content is 3,78-5,34%; ash content 2,31-2,69%; crude fiber content 3,32-7,41%; reducing sugar content 50,67-60,88%; and total sugar content 51,42-62,84%. Of the four treatments performed, the best treatment for *Granny Smith* apple flour according to de garma method was a solution of 1000 ppm Natrium metabisulfite.

Keywords: Apple flour, Natrium Metabisulfite, brightness level, *Granny Smith* Apples.