

**PENGARUH KADAR POLIFENOL TERHADAP WARNA DAUN
TEMBAKAU VORSTENLENDE (*Nicotiana tabacum* var. *vorstenlenden*) DI
PT PERKEBUNAN NUSANTARA X**

Oleh :
Misa Rahmawati

INTISARI

Tembakau Vorstenlanden merupakan produk pertanian yang dimanfaatkan daunnya sebagai bahan baku pembuatan cerutu dan sebagai komoditas ekspor yang memiliki nilai tinggi. Salah satu yang berperan penting dalam kualitas tembakau adalah warna daun tembakau. Polifenol adalah salah satu jenis senyawa organik dalam daun tembakau yang mempunyai kontribusi terhadap warna tembakau. Oksidasi berantai senyawa polifenol yang dikatalisasi oleh enzim polifenol oksidase akan menghasilkan senyawa makromolekul berwarna coklat gelap yang akan mempengaruhi intensitas warna. Untuk itu dilakukan pengukuran kadar polifenol pada setiap kriteria warna penjualan yang ada pada PT Perkebunan Nusantara X.

Pengukuran kadar polifenol dilakukan dengan menggunakan metode Folin-Ciocalteu. Prinsip metode Folin-Ciocalteu adalah reaksi oksidasi dan reduksi kolorimetrik untuk mengukur semua senyawa fenolik dalam sampel uji. Sampel yang digunakan adalah daun tembakau kering dari berbagai kriteria warna hasil dari proses sortasi. Kriteria warna daun tembakau dibagi menjadi 4 warna dasar dan 8 tangga warna, yaitu B1, B2, B3, B4, B5, B6, B7, B8, KB1, KB2, KB3, KB4, KB5, KB6, KB7, KB8, KM1, KM2, KM3, KM4, KM5, KM6, KM7, KM8, M1, M2, M3, M4, M5, M6, M7, dan M8. Hasil pengukuran menunjukkan sampel tembakau B1 memiliki kadar polifenol sebesar 0,0944 mg/ml atau 2,36%, B8 memiliki kadar polifenol sebesar 0,1468 mg/ml atau 3,46%, M1 memiliki kadar polifenol sebesar 0,1021 mg/ml atau 2,42%, M8 memiliki kadar polifenol sebesar 0,1816 mg/ml atau 4,34%, KB1 memiliki kadar polifenol sebesar 0,1503 mg/ml atau 3,76%, KB8 memiliki kadar polifenol sebesar 0,1545 mg/ml atau 3,82%, KM1 memiliki kadar polifenol sebesar 0,1357 mg/ml atau 3,24%, sedangkan KM8 memiliki kadar polifenol sebesar 0,1560 mg/ml atau 3,77%. Berdasarkan hasil tersebut menunjukkan bahwa semakin tinggi tangga warna yakni dari ke-1 hingga ke-8 maka semakin besar pula kadar polifenolnya.

Kata kunci : Tembakau, polifenol, warna, daun tembakau, Folin-Ciocalteu.

***EFFECT OF POLYPHENOL LEVELS ON THE COLOR OF
VORSTENLENDE TOBACCO'S LEAVES (*Nicotiana tabacum* var.
vorstenlenden) IN PT PERKEBUNAN NUSANTARA X***

By: *MisaRahmawati*

ABSTRACT

Vorstenlanden Tobacco is an agricultural product which leaves used as the raw material of cigar and has high value as an export commodity. One of the major factors of tobacco's quality is the color of its leaves. Polyphenol is one of organic compounds in tobacco's leaves that determine the color. Chained oxidation of Polyphenol compound which catalyzed by oxidized polyphenol enzyme produces dark brown macromolecule compound that will affect the color's intensity. Therefore, measurement of polyphenol's levels is done in every deals-color-criterion in PT Perkebunan Nusantara X.

The measurement of polyphenol's levels was done using Folin-Ciocalteu method. The principle of Folin-Ciocalteu method is analyzing oxidation reaction and colorimetric reduction to measure phenolic compound in test sample. The samples were dried tobacco leaves of every color criteria from the result of sorting process. The color criteria of tobacco's leaves were divided into 4 base colors with 8 color levels, consist of B1, B2, B3, B4, B5, B6, B7, B8, KB1, KB2, KB3, Kb4, KB5, KB6, KB7, KB8, KM1, KM2, KM3, KM4, KM5, KM6, KM7, KM8, M1, M2, M3, M4, M5, M6, M7, and M8. The result indicated that sample tobacco B1 had 0.0944 mg/ml level of polyphenol or 2.36%. Sample tobacco B8 had 0.1468 mg/ml level of polyphenol or 3.46%. Sample tobacco M1 had 0.1021 mg/ml level of polyphenol or 2.42%. Sample tobacco M8 had 0.1816 mg/ml level of polyphenol 4.34%. Sample tobacco KB1 had 0.1503 mg/ml level of polyphenol or 3.76%. Sample tobacco KB8 had 0.1545 mg/ml level of polyphenol or 3.82%. Sample tobacco KM1 had 0.1357 mg/ml level of polyphenol or 3.24%. The last one, sample tobacco KM8 had 0.1560 mg/ml level of polyphenol or 3.77%. Based on the result, it showed that was the higher level of color which was from number 1 to number 8, the bigger polyphenol's level.

Keywords: tobacco, polyphenol, color, tobacco's leaf, Folin-Ciocalteu