

**ANATOMICAL CHARACTERIZATION OF RHIZOME
AND LEAF-SHEATH, AND THE CONTENT OF ANTHOCYANIN
AND VITAMIN C ON RHIZOME, LEAF-SHEATH AND FLOWER
OF KECOMBRANG (*Nicolaia speciosa* H. 'Pink')**

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ABSTRACT

In Indonesia, there are many plants that can be used as herbal medicine or vegetables. One of them is *Nicolaia speciosa* H. 'Pink'. It is called Kecombrang by the Indonesian. This plant is included in monocot that contain a huge amount of Vitamin C and anthocyanin. This anthocyanin can be seen from the color of the stem and sometimes the rhizome. The aim of this study was to know the anatomical structures and level of Vitamin C and anthocyanin content in kecombrang. There were three methods used in this study : 1. Non-Embedding (preparation of slide), 2. Titration (Vitamin C analysis) and 3. Spectrophotometric (anthocyanin analysis). The results showed that rhizome consist of epidermal layer, hypodermal layer, parenchyma layer and bundle sheath. Leaf-sheath has four layers that one is epidermal layer, hypodermal layer, parenchyma layer and bundle sheath. Anthocyanin distribution on rhizome, leaf-sheath and flower took place on epidermal cells especially on its vacuole. The content of anthocyanin at rhizome, leaf-sheath and flower, respectively were 2.20 ppm, 4.36 ppm, and 1.34 ppm. It was showed by the red color that appears in all three organs. On the leaf-sheath and rhizome, the red color caused by an anthocyanin looked so clear. The level of Vitamin C in rhizome (35.08 mg/100g) was higher than that were in the stem (30.58 mg/100g) and flower (26.5 mg/100 g). So, besides the petal and sepal on flower, rhizome may be potentially used as herbal medicine and vegetables with simultaneous scientific experiment.

KEY WORDS : Kecombrang, anatomical structure of Kecombrang, Vitamin C, Anthocyanin

**KARAKTERISASI ANATOMI RIMPANG
DAN PELEPAH DAUN SERTA KANDUNGAN ANTOSIANIN DAN VITAMIN C
PADA RIMPANG, PELEPAH DAUN DAN BUNGA
KECOMBRANG (*Nicolaia speciosa* H. 'Pink')**

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INTISARI

Di Indonesia, banyak dijumpai jenis tanaman yang berpotensi sebagai sayuran maupun obat herbal, salah satunya kecombrang (*Nicolaia speciosa* H. 'Pink'). Tumbuhan ini termasuk kelompok monokotil yang diduga mengandung Vit.C dan antosianin. Senyawa antosianin tersebut bisa dilihat pada pelepah daun dan mungkin juga pada rimpang. Penelitian ini bertujuan untuk mengetahui struktur anatomis rimpang dan pelepah daun, serta kadar Vit.C dan antosianin pada kecombrang. Metode yang digunakan pada penelitian ini : 1. Metode Non-Embedding (pembuatan preparat anatomi), 2. Metode Titrasi (analisis Vit.C) dan 3. Metode Spektrofotometris (analisis antosianin). Hasil penelitian menunjukkan bahwa rimpang terdiri dari jaringan epidermis, jaringan hipodermis, jaringan parenkim dan berkas pengangkut. Pelepah daun memiliki empat macam jaringan yaitu jaringan epidermis, jaringan hipodermis, jaringan parenkim dan jaringan berkas pengangkut. Distribusi antosianin pada rimpang, pelepah daun dan bunga terletak di bagian epidermis terutama pada vakuolanya. Kadar antosianin pada rimpang, pelepah daun dan bunga berturut-turut sebesar 2.20 ppm, 4.36 ppm dan 1.34 ppm. Kadar Vit. C pada rimpang, pelepah daun dan bunga berturut-turut sebesar 35.08 mg/100g, 30.58 mg/100g dan 26.5 mg/100g. Jadi, selain petal dan sepal pada bunga kecombrang, bagian rimpang mungkin berpotensi untuk dapat digunakan sebagai sayuran dan obat herbal tetapi perlu duji secara ilmiah lebih lanjut.

KATA KUNCI : Kecombrang, anatomi kecombrang, Vitamin C, antosianin