

## PEMANFAATAN AIR PERASAN UBI JALAR UNGU UNTUK MEWARNAI TROMBOSIT METODE *BRECKER CRONKITE*

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### ABSTRAK

Trombosit merupakan keping darah berukuran kecil (2-4 $\mu$ m), trombosit sangat penting dalam pembekuan darah. Nilai normal trombosit 150.000-450.000 sel/mm<sup>3</sup> darah. Pemeriksaan yang dilakukan yaitu hitung jumlah trombosit dengan metode *Brecker Cronkite* karena metode *Brecker Cronkite* yaitu pemeriksaan yang dianjurkan oleh *ICSH (International Commite for Standardization in Hematology)*. Pemeriksaan ini menggunakan bilik hitung *Neurbauer* dimana pemeriksaannya menggunakan ammonium oksalat 1% yang dapat melisiskan eritrosit tetapi kenyataannya sukar untuk menghitung trombosit dikarenakan trombosit mudah pecah, dan berlatar belakang jernih, sehingga penting dilakukan pewarnaan. Hasil penelitian Tania. M. E yaitu *methylen blue* dapat digunakan sebagai pewarna trombosit. Tetapi *methylen blue* bersifat toxic bagi tubuh. Berdasarkan hambatan tersebut, peneliti melakukan penelitian dengan memanfaatkan air perasan ubi jalar ungu untuk mewarnai trombosit metode *Brecker Cronkite*. Tujuan penelitian tersebut untuk mengetahui konsentrasi optimal air perasan ubi jalar ungu serta waktu inkubasi optimal air perasan ubi jalar ungu yang dapat mewarnai trombosit metode *Brecker Cronkite*. Metode penelitian menggunakan desain penelitian studi literatur. Hasil penelitian menunjukkan bahwa air perasan ubi jalar ungu mampu mewarnai trombosit serta menurut beberapa jurnal bahwa ekstrak ubi jalar ungu dapat mewarnai sel *Paramecium sp.* dan bakteri Gram positif serta pewarna alami lain seperti bunga delima dan kol merah dapat mewarnai sel darah manusia yang memiliki susunan sel polar karena pewarna alami memiliki antosianin yang bersifat polar, maka akan saling mengikat. Air perasan ubi jalar ungu dapat mewarnai trombosit dengan konsentrasi 100% serta waktu inkubasi 15 menit.

Kata kunci : Trombosit, Air Perasan Ubi Jalar Ungu, Antosianin, Metode *Brecker Cronkite*

## UTILIZATION OF PURPLE SWEET POTATO PRESS WATER FOR COLORING PLATELETS BY *BRECKER CRONKITE* METHOD

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### ABSTRACT

*Platelets are small pieces of blood (2-4  $\mu\text{m}$ ), platelets are very important in blood clotting. The normal amount of platelets is 150,000-450,000 cells /  $\text{mm}^3$  of blood. The test are conducted is calculate the number of platelets by the Brecker Cronkite method because the Brecker Cronkite method is an examination recommended by ICSH (International Committee for Standardization in Hematology). This test uses a Neubauer booth and uses 1% ammonium oxalate which can lyse erythrocytes but in fact it is difficult to count platelets because platelets break easily, and the back is clear so it is important to coloring. Tania. M. E's research results, named methylene blue can be used as a platelet dye. But methylen blue is toxic to the body. Based on these deficiency, researchers conducted a study using purple sweet potato press water to color the Brecker Cronkite platelet method. The purpose of the study was to determine the optimal concentration of purple sweet potato juice water and the optimal incubation time of purple sweet potato press water that can color the platelets of the Brecker Cronkite method. The research method uses literature studies. The results showed that purple sweet potato press water was able to describe platelets and also several journals about purple sweet potato extract could describe *Paramecium sp* cells. and Gram-positive bacteria and other natural dyes such as pomegranate and red cabbage can choose human cells that have a polar cell structure because natural dyes have anthocyanin that functions polar, so they will bind to one another Purple sweet potato juice can dye platelets with a concentration of 100% and an incubation time of 15 minutes.*

*Keyword : Platelets, purple sweet potato press water, anthocyanins, Brecker Cronkite Method*