INTISARI

Indra Ayu Vidyaningrum. NIM 3212058. *Pemanfaatan Kombinasi Sari Ubi Jalar Ungu Dan Buah Bit Sebagai Alternatif Pewarnaan Gram.*

Zat warna sintetik pada pewarnaan gram bertujuan untuk mempertajam dan memperjelas gambaran sel pada bakteri sehingga mempermudah untuk diamati di bawah mikroskop. Zat warna sintetik memiliki kelemahan yaitu harganya yang mahal dan mudah rusak. Oleh karena itu, dibutuhkan pewarna alternatif sebagai pengganti atau sebagai pilihan lain dari pewarna sintetik. Tujuan penelitian ini untuk mengetahui apakah kombinasi sari ubi jalar ungu dan buah bit mampu mewarnai sel.Metode penelitian deskriptif eksperimental. Populasi penelitian ini adalah ubi jalar ungu dan buah bit yang didapatkan di pasar sragen. Teknik sampling dengan cara quota sampling. Ubi jalar ungu dan buah bit masing-masing dicuci dan dikupas kulitnya kemudian diparut lalu ditimbang sebanyak 100g lalu diperas dengan kertas saring, sari ubi jalar ungu dan buah bit disimpan. Keduanya dihomogenkan masing-masing 10ml. Sampel bakteri dari ATCC 29213 (*E.coli*) dan ATCC 25922 (*S.aureus*) yang telah dibuat preparat di lakukan pewarnaan dengan kombinasi sari ubi jalar ungu dan buah bit. Penelitian ini menggunakan quasi experiment design dimana digunakan pretest-posttest pada kelompok kontrol dan kelompok eksperimen.Hasil yang diperoleh menunjukkan bahwa kombinasi sari ubi jalar ungu dan buah bit tidak mampu membedakan bakteri gram positif dan bakteri gram negatif tetapi mampu mewarnai sel bakteri. Kesimpulan bahwa kombinasi sari ubi jalar ungu dan buah bit tidak dapat digunakan sebagai pengganti zat warna utama pada pewarnaan Gram.

Kata kunci : *Staphylococcus aureus, Escherichia coli, Ubi Jalar Ungu, Buah Bit*

ABSTRACT

Indra Ayu Vidyaningrum. NIM 3212058. *Utilization of a Combination of Purple Sweet Potato Juice and Beetroot as an Alternative for Gram Staining.*

Synthetic dyes in gram stain aim to sharpen and clarify the picture of cells in bacteria so that they are easier to observe under a microscope. Synthetic dyes have the disadvantage of being expensive and easily damaged. Therefore, alternative dyes are needed as a substitute or as another option for synthetic dyes. The purpose of this study was to determine whether the combination of purple sweet potato juice and beetroot was able to color cells. The research method was descriptive experimental. The population of this research is purple sweet potato and beetroot which are obtained in the Sragen market. Sampling technique by means of quota sampling. Purple sweet potato and beetroot were washed and peeled, then grated and weighed as much as 100g then squeezed with filter paper, purple sweet potato juice and beetroot were stored. Both were homogenized 10ml each. Bacterial samples from ATCC 29213 (*E.coli*) and ATCC 25922 (*S.aureus*) which had been prepared were stained with a combination of purple sweet potato juice and beetroot. This study used a quasi-experimental design where pretest-posttest was used in the control group and the experimental group. The results showed that the combination of purple sweet potato juice and beetroot was not able to differentiate between gram-positive bacteria and gram-negative bacteria but was able to stain bacterial cells. The conclusion that the combination of purple sweet potato juice and beetroot cannot be used as a substitute for the main dye in Gram staining

Keywords : *Staphylococcus aureus*, *Escherichia coli*, Purple Sweet Potato, Bit