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**Efektivitas Ekstrak Buah Tomat Ceri (*Solanum lycopersicum* var. *cerasiforme*)
Sebagai Alternatif Pengganti Eosin Terhadap Kualitas Pewarnaan
Hematoxylin Eosin Sediaan Jaringan Ginjal Mencit (*Mus musculus*)**

xvi + 36 halaman + 18 tabel + 10 gambar + 12 lampiran

ABSTRAK

Pewarnaan Hematoxylin-Eosin (HE) merupakan metode standar dalam pemeriksaan histologi, dengan eosin sebagai pewarna sitoplasma. Namun, sifat karsinogenik eosin dan dampaknya terhadap lingkungan menjadi alasan dibutuhkan alternatif pewarna alami. Penelitian ini bertujuan untuk mengevaluasi efektivitas ekstrak buah tomat ceri (*Solanum lycopersicum* var. *cerasiforme*) sebagai pengganti eosin dalam pewarnaan HE pada sediaan jaringan ginjal mencit (*Mus musculus*). Jenis penelitian ini adalah eksperimental dengan desain posttest-only control group design. Pewarnaan dilakukan dengan lima variasi konsentrasi ekstrak tomat ceri (20%, 40%, 60%, 80%, dan 100%) serta kontrol menggunakan eosin. Parameter penilaian meliputi kejelasan inti sel, sitoplasma, intensitas warna, dan kontras pewarnaan, yang dianalisis menggunakan uji *Kruskal Wallis*. Hasil penelitian menunjukkan bahwa sediaan dengan eosin memiliki kualitas pewarnaan terbaik (skor rata-rata 8), sedangkan ekstrak tomat ceri konsentrasi 20% menunjukkan kualitas pewarnaan tertinggi di antara kelompok perlakuan (skor rata-rata 6,25) dari skor maksimal 8. Hasil uji *Kruskal wallis Test* menunjukkan nilai signifikansi $<0,05$, maka ada perbedaan signifikan total skor kualitas pewarnaan sediaan ginjal mencit menggunakan Hematoxylin Eosin dan Ekstrak Tomat Ceri. Sehingga dapat disimpulkan bahwa Ekstrak Tomat Ceri kurang baik sebagai pengganti Eosin.

Kata Kunci: Tomat ceri (*Solanum lycopersicum* var. *cerasiforme*), Eosin, Mencit
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Effectiveness of Cherry Tomato Fruit Extract (*Solanum lycopersicum* var. *cerasiforme*) as an Alternative to Eosin on the Quality of Hematoxylin Eosin Staining of Mice (*Mus musculus*) Kidney Tissue Preparations

xvi + 36 pages + 18 tables + 10 pictures + 12 attachment

ABSTRACT

Hematoxylin-Eosin (HE) staining is a standard method in histology examination, with eosin as a cytoplasmic dye. However, the carcinogenic properties of eosin and its impact on the environment are the reasons for the need for alternative natural dyes. This study aims to evaluate the effectiveness of cherry tomato fruit extract (*Solanum lycopersicum* var. *cerasiforme*) as a substitute for eosin in HE staining of mouse (*Mus musculus*) kidney tissue preparations. This type of research is experimental with a posttest-only control group design. Staining was carried out with five variations of cherry tomato extract concentrations (20%, 40%, 60%, 80%, and 100%) and a control using eosin. Assessment parameters include the clarity of the cell nucleus, cytoplasm, color intensity, and staining contrast, which were analyzed using the *Kruskal Wallis* test. The results showed that the preparation with eosin had the best staining quality (average score of 8), while cherry tomato extract with a concentration of 20% showed the highest staining quality among the treatment groups (average score of 6.25) from a maximum score of 8. The results of the *Kruskal Wallis* Test showed a significance value of <0.05 , so there was a significant difference in the total staining quality score of the mouse kidney preparation using Hematoxylin Eosin and Cherry Tomato Extract. So it can be concluded that Cherry Tomato Extract is not good as a substitute for Eosin.

Keywords: Cherry tomato (*Solanum lycopersicum* var. *cerasiforme*), Eosin, Mice
Reading Source: 35 (2007-2024)