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Perbandingan Kualitas Pewarnaan Pada Sediaan Histologi Hepar Mencit (*Mus musculus*) Menggunakan Ekstrak Daun Pucuk Merah (*Syzygium myrtifolium*) Sebagai Alternatif Pengganti Eosin Pada Pewarnaan Hematoxylin Eosin

xvi + 41 halaman + 19 tabel + 10 gambar + 14 lampiran

ABSTRAK

Eosin merupakan salah satu bahan pewarna pada metode Hematoxylin Eosin, Eosin juga merupakan pewarna sintetis yang termasuk golongan xanthene, dan memiliki sifat karsinogenik. Daun Pucuk Merah (*Syzygium myrtifolium*) memiliki kandungan antosianin, sifat dan karakteristiknya menyerupai eosin yang sama sama asam dan mampu menghasilkan pigmen warna oranye dan merah. Penelitian ini bertujuan untuk mengetahui perbandingan kualitas sediaan histologi menggunakan eosin dan ekstrak daun pucuk merah (*Syzygium myrtifolium*). Jenis penelitian ini bersifat eksperimen dengan menggunakan ekstrak daun pucuk merah konsentrasi 30%, 50%, 75%, 80% dan 100% sebagai pengganti eosin pada sediaan hepar mencit yang dinilai berdasarkan inti sel, sitoplasma, intensitas pewarnaan, keseragaman warna dan hasil akhir pewarnaan dengan pemberian skor baik dan tidak baik. Kualitas pewarnaan sediaan hepar mencit menggunakan pewarnaan Hematoxylin Eosin, Ekstrak Daun Pucuk Merah 30%,50%,75%,80% dan 100% sebagai pengganti Eosin memiliki rerata skor 8; 4,5; 4,2; 4; 4; dan 4 dari skor minimum baik 8, yang artinya kelima perlakuan memiliki kualitas tidak baik dan 1 perlakuan memiliki kualitas baik. Hasil uji Kruskal-wallis Test menunjukkan nilai signifikansi sebesar 0,004 ($p < 0,05$)

Kata Kunci: Daun pucuk merah (*Syzygium myrtifolium*), Eosin, Hepar mencit
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Comparison of Staining Quality on Mouse Liver (*Mus musculus*) Histological Preparations Using Red Shoot Leaf (*Syzygium myrtifolium*) Extract as an Alternative Substitute for Eosin in Hematoxylin-Eosin Staining

xvi + 41 pages + 19 tables + 10 figures + 14 appendices

ABSTRACT

Eosin is a commonly used dye in the Hematoxylin-Eosin (HE) staining technique. It belongs to the synthetic xanthene dye group and is known to possess carcinogenic properties. As a potential natural alternative, red shoot leaves (*Syzygium myrtifolium*) contain anthocyanin compounds that share similar acidic properties and staining characteristics with eosin, capable of producing orange to red pigmentation. This experimental study aimed to evaluate and compare the histological staining quality between synthetic eosin and red shoot leaf extract as a cytoplasmic dye. Red shoot leaf extracts at concentrations of 30%, 50%, 75%, 80%, and 100% were used as eosin substitutes for staining mouse liver tissue. The staining quality was assessed based on five parameters: nuclear clarity, cytoplasmic staining, staining intensity, color uniformity, and overall staining outcome. Each parameter was evaluated using a scoring system categorized as good or not good. The findings showed that the control group stained with synthetic eosin achieved the highest mean score (8), indicating good staining quality. In contrast, all groups treated with red shoot leaf extract at various concentrations showed lower mean scores of 4.5, 4.2, 4, 4, and 4 respectively, all falling under the not good category. Statistical analysis using the Kruskal-Wallis test yielded a significance value of 0.004 ($p < 0.05$), indicating a statistically significant difference among the groups.

Keywords: Red shoot leaf (*Syzygium myrtifolium*), Eosin, Mouse liver
References: 29 (2014–2025)