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Pengaruh Penyesuaian pH Reagen Pewarna Hematoxylin Dan Eosin Lama Terhadap Kualitas Hasil Pewarnaan Preparat Jaringan Kanker Payudara

xvi + 51, 15 tabel, 5 gambar, dan 12 lampiran

ABSTRAK

Pewarnaan Hematoxylin dan Eosin (HE) merupakan metode standar dalam pemeriksaan histopatologi, terutama dalam penegakan diagnosis kanker payudara. Salah satu faktor yang memengaruhi kualitas pewarnaan adalah pH reagen. Reagen hematoxylin dan eosin yang telah digunakan selama tiga bulan berpotensi mengalami perubahan pH, yang dapat menurunkan kualitas hasil pewarnaan jaringan. Penelitian ini bertujuan untuk mengetahui pengaruh penyesuaian pH terhadap reagen hematoxylin dan eosin yang telah digunakan selama tiga bulan terhadap kualitas hasil pewarnaan preparat jaringan kanker payudara. Penelitian ini dilakukan pada bulan Maret-Mei 2025 di Klinik Morotai Patologi Kota Bandar Lampung. Penelitian ini merupakan penelitian eksperimental dengan tiga kelompok perlakuan: reagen baru (kontrol), reagen lama tanpa penyesuaian pH (perlakuan 1), dan reagen lama yang telah disesuaikan pH-nya menggunakan larutan asam asetat dan NaOH (perlakuan 2). Sebanyak 27 preparat dianalisis menggunakan metode skoring berdasarkan empat parameter: inti sel, sitoplasma, intensitas, dan kontras pewarnaan. Analisis data dilakukan dengan uji Kruskal-Wallis. Hasil menunjukkan nilai p-value sebesar 0,000 ($<0,05$), yang berarti terdapat perbedaan signifikan antara kelompok kontrol dan kelompok perlakuan, akan tetapi penyesuaian pH pada reagen lama tidak memberikan pengaruh terhadap kualitas pewarnaan pada preparat jaringan kanker payudara.

Kata kunci : Eosin, Hematoxylin, Kanker Payudara, Pewarnaan Jaringan, pH Reagen

Daftar bacaan : 24 (2012–2024)

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The Effect of pH Adjustment in Aged Hematoxylin and Eosin Staining Reagents on the Staining Quality of Breast Cancer Tissue Preparations

xvi + 51 pages, 15 tables, 5 figures, and 12 appendices

ABSTRACT

Hematoxylin and Eosin (HE) staining is a standard method in histopathological examination, particularly in establishing the diagnosis of breast cancer. One factor that affects staining quality is the pH of the reagents. Hematoxylin and eosin reagents that have been used for three months are prone to pH changes, which can reduce the quality of tissue staining. This study aims to determine the effect of pH adjustment on hematoxylin and eosin reagents that have been used for three months on the staining quality of breast cancer tissue preparations. The research was conducted from March to May 2025 at the Morotai Pathology Clinic in Bandar Lampung City. This is an experimental study with three treatment groups: new reagents (control), aged reagents without pH adjustment (treatment 1), and aged reagents with pH adjustment using acetic acid and NaOH solution (treatment 2). A total of 27 slides were analyzed using a scoring method based on four parameters: cell nuclei, cytoplasm, staining intensity, and contrast. Data were analyzed using the Kruskal-Wallis test. The results showed a p-value of 0.000 (<0.05), indicating a significant difference between the control and treatment groups. However, pH adjustment of the aged reagents did not improve the staining quality of the breast cancer tissue preparations.

Keywords : Breast Cancer, Eosin, Hematoxylin, Reagent pH, Tissue Staining

Reference List : 24 (2012–2024)