

comerciais A1 (4+/4+) na automação. Nos testes manuais, os resultados foram similares, com ausência de reatividade com reagente anti- A,B. As aglutininas naturais não apresentaram reatividade após potencialização, e as hemácias do doador tratadas com bromelina, revelaram fraca reatividade (1+/4+) frente ao reagente anti-B. A ausência de aglutinação com a lectina anti-A1, a forte reatividade com a lectina anti-H (4+/4+), a PAI negativa e o fenótipo eritrocitário Le (a-b+), permitiram descartar os fenótipos Bombay e para- Bombay além de confirmar o status secretor do doador. Autocontrole e TAD foram negativos. O teste de adsorção-eluição revelou a capacidade das hemácias do doador de fixar anti-B, reagindo apenas com hemácias do grupo B, caracterizando-se um fenótipo B com baixa densidade antigênica. O Centro de Referência corroborou os resultados obtidos em nosso laboratório. **Discussão e conclusão:** Considerando as implicações clínicas do sistema ABO, é essencial uma análise minuciosa diante de discrepâncias na tipagem sanguínea. Em nossa rotina laboratorial foi possível identificar um subtipo de B, raro na população brasileira. Estudos complementares, como a pesquisa de antígenos solúveis ABH e técnicas moleculares, estão em andamento para caracterização completa do subgrupo de B descrito. **Referências:** Brasil. Ministério da Saúde. Portaria de Consolidação nº 5, 28 de setembro de 2017, Anexo IV, Art. 118, 2º§.

<https://doi.org/10.1016/j.htct.2025.105621>

ID – 1129

ANALYTICAL PERFORMANCE OF THE DG READER NET IN IDENTIFYING CRITICAL RESULTS IN IMMUNOHEMATOLOGIC ASSAYS ANTI-HUMAN GLOBULIN PHASE-DEPENDENT IN THE GEL TECHNIQUE

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Introduction: Accurate identification of critical results in immunohematology is essential for transfusion safety in blood bank services. False-negative reactions in tests involving the anti-human globulin (AHG) phase can hinder the detection of clinically significant antigens and alloantibodies, compromising compatibility and transfusion safety. **Objectives:** Therefore, we aim to investigate the analytical performance of the DG Reader NET (Grifols®) in detecting critical results in immunohematologic tests involving the AHG phase using gel centrifugation. Thus, analytical reproducibility between two automated readers, analytical efficacy and the agreement level between automated and manual readings were assessed. **Material and methods:** The assay included 500 hemagglutination reactions with various reactivity degrees (0, (+), 1+, and 2+; encompassing strong, weak, and doubtful

reactions) in both direct and indirect antiglobulin tests. Direct reactions were centrifuged immediately. Indirect reactions were incubated at 37°C for 15 minutes. Following gel card centrifugation, the results were read by two blinded observers and by two validated automated readers. Observers underwent previous calibration. Agreement was assessed using Cohen's Kappa (K) coefficient or simple agreement and diagnostic performance via accuracy, sensitivity, specificity, and positive and negative predictive values (PPV and NPV). Statistical significance ($\alpha=0.05$) and confidence intervals (95%) were determined using Z-tests and bootstrap resampling (10,000 iterations). Chi-square tests or Fisher's exact test were applied depending on cell frequencies. **Results:** The automated reader showed an accuracy of 0.88 (0.85-0.91), sensitivity of 0.87 (0.84- 0.90), specificity of 0.89 (0.83-0.94), PPV of 0.96 (0.94-0.98), and NPV of 0.69 (0.62-0.76). Subgroup analysis revealed high specificity and NPV for negative samples (0.89; 0.84-0.94). For 1+ and 2+ reactions, sensitivity and PPV were 1.00 (0.97-1.00), demonstrating excellent discriminatory capacity at higher reactivity intensities ($P < 0.001$). However, for the (+) group, sensitivity was unsatisfactory (0.59; 0.51-0.68) with no significant difference, highlighting the reader's lack to flag weakly positive or doubtful results. Regarding reproducibility, there was excellent agreement between the devices ($K=0.93$; 0.90-0.95). By reactivity group, agreement was 0.94 (0.90-0.98) for negative, 0.81 (0.74-0.88) for (+), 0.98 (0.96-1.00) for 1+, and 0.96 (0.92-0.99) for 2+. These results indicate high automation reproducibility regardless of reactivity. Global agreement between reader and observer was also high (0.72; 0.67-0.77). For negative, 1+, and 2+ reactions, inter-method agreement exceeded 71% (63%-94%), while for (+) it was unsatisfactory (59%; 51%-68%). **Discussion and conclusion:** These findings demonstrate that although automation ensures high reproducibility and agreement for negative and positive reactions, there is a significant drop in agreement for weakly positive reactions (+). Despite the benefits of automation for analytical quality in blood banking, the data suggest that mandatory review criteria by qualified operators should be established for negative, weakly positive, and doubtful results generated by automated systems, in order to ensure the sensitivity required for immunohematological assays that are anti-human globulin-Dependent and guarantee safety in blood transfusion contexts.

<https://doi.org/10.1016/j.htct.2025.105622>

ID – 504

ANTICORPO ANTI-CD36 E REFRATARIEDADE PLAQUETÁRIA - UM RELATO DE CASO

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