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# Automated enumeration of immature granulocytes

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The performance characteristics of the XE-2100 (Sysmex, Kobe, Japan) automated immature granulocyte (IG) count were studied. The automated IG count was compared with the manual morphology count and with a proposed reference flow cytometric count. The comparison data were analyzed by both least-squares and Passing-Bablok regression analysis. Long-term imprecision using preserved blood quality control specimens at different levels showed a range from 2.59% to 3.57% coefficient of variation (CV) for within-run imprecision and 3.57% to 6.85% CV for total imprecision. The within-run reproducibility performed using fresh blood on 3 different specimens showed a range from 5.55% to 8.24% CV. The counts were stable at both room temperature and after refrigeration for 24 hours.Passing-Bablok regression analysis showed excellent agreement between the proposed reference flow cytometric IG count and the XE-2100 IG count, while there was less agreement with the manual morphology count. Our results indicate that the automated IG count can replace the manual morphology count for IG counting in the clinical laboratory. The results also confirm that the flow cytometric IG count is superior to and can replace the manual morphology count as a reference method for IG counting.

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