

[Clin Lab Haematol](#). 2000 Dec;22(6):345-50.

New quantitative parameters on a recently introduced automated blood cell counter--the XE 2100.

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The XE 2100 (Sysmex Corporation) is a cell counter that furthers the technology of fluorescent flow cytometry developed from the earlier range of Sysmex analysers. The new diagnostic features are a nucleated red cell count (NRBC), the ability to measure platelets by impedance as well as an 'optical' platelet count using a fluorescence dye and an immature granulocyte (IG) count. The NRBC count was highly correlated ($r = 0.97$) with the manual reference count. For counts below $100 \times 10^9/l$ the 'optical' method and the immunocount gave good a correlation ($r = 0.97$) optical and impedance counts were also well correlated ($r = 0.89$). The use of the 'optical' platelet count significantly improves the reliability of low platelet counts. The IG count correlated with visual counts ($r = 0.81$) and allows the detection of immature cells at an earlier stage in the laboratory process. The introduction of fluorescent flow cytometric analysis allows extended quantification of additional cell populations and so potentially improves screening and monitoring of various pathological conditions.

PMID: 11318800 [PubMed - indexed for MEDLINE]