Hemalog 8 Hematocrit with a Correction for Leukocytes

To the Editor:

The Hemalog 8 (Technicon Instruments Corp., Tarrytown, NY 10591) includes the Buffy coat in its hematocrit (1). We have tested a new device from Technicon, which calculates a corrected hematocrit. The algorithm is:

\[
Hct_c = Hct - 0.005 
\cdot \left( \frac{\text{leuk. concn} \cdot \text{L}}{5 \times 10^9} \right) 
\]

where \(Hct_c\) and \(Hct\) are the leukocyte-corrected and uncorrected Hemalog 8-hematocrits, respectively, and ip means the integer part.

For comparison, we measured hematocrit with a Hettich hematocrit centrifuge (Andreas Hettich, Tuttlingen, F.R.G.). Figure 1 shows Hemalog 8 minus manual hematocrit before the correction in samples with high leukocyte counts. The difference correlates strongly to the leukocyte concentration \((r = 0.98)\). Figure 2 shows the correlation between corrected and manual hematocrits. There was no statistically significant difference.

A print card with the correction can easily be installed in the Hemalog 8, or a laboratory computer with a central processing unit may perform the algorithm.

References

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