ABSTRACT

Background: Accurate determination of hemoglobin (Hb) levels is vital to elucidate the extent of anemia, and thus a guide to clinical and research care in harnessing timely diagnosis. This study assessed the diagnostic performance of TrueHb ® point-of-care hemometer at International Hospital Kampala, Uganda.

Methods: We analyzed ethylene-di-amine tetra acetic acid (EDTA) blood samples to estimate Hb levels using parallel testing with TrueHb® hemometer and Sysmex i3 analyzer. Data was analyzed using STATA 12 (College Station, TX, USA) to ascertain diagnostic performance of the test assays using the Bland and Altman method. Sensitivity, specificity, positive and negative predictive values were calculated.

Results: We analyzed 402 EDTA blood samples, the mean difference of the two methods was 2.2219 (SD 1.07915),p-value 0.017 The accuracy of the two assays as measured by the intra- class correlation coefficients (ICC), the average measure was 0.793, which indicated a substantial correlation between the two assays. The average performance TAT for the machine was 2.46 minutes (95% CI= 2.37-2.55)

Conclusion: The TrueHb® point-of-care hemometer could be an accurate point of care tool for screening anemia with recalibration done positively by 2.22g/dl. The TAT for the TrueHb® meter is convenient.