Author's response to reviews

Title: Hemoglobin estimation by the HemoCue(R) portable hemoglobin photometer in a resource poor setting

Authors:

Bernard Nkrumah (skrakyo@yahoo.com)
Samuel Blay Nguah (sbnguah@yahoo.com)
Nimarko Sarpong (nimakosrpong@yahoo.com)
Denise Dekker (dekkerdenise@hotmail.com)
Ali Idriss (drissli101@yahoo.com)
Juergen May (may@bni-hamburg.de)
Yaw Adu-Sarkodie (yasax@yahoo.co.uk)

Version: 2 Date: 4 April 2011

Author's response to reviews: see over
Dear Sir/Madam,

SUBMISSION OF REVISED MANUSCRIPT

With reference to your e-mail dated 28.03.2011, we submit our revised manuscript. We thank the reviewers for their helpful criticisms and comments. We carefully responded point-by-point and addressed all comments.

Yours truly,

Bernard Nkrumah.
Response to reviewer 1 (Highlight in turquoise)

*Factors leading to erroneous results are not evaluated; in my personal experience the technique of filling the HemoCue cuvette has some importance.*

**Response:** Erroneous results were checked by ensuring the QCs were done daily before testing and also by offering adequate training to the lab personnel’s (Quality control, lines 1-5; Discussion, last paragraph, page 12, lines 4-5 and 7-10)

Nothing is said about calibration of the Sysmex.

**Response:** The Sysmex is calibrated quarterly. In between this period, calibrations are done whenever a major maintenance is done by the supplier or when QCs consistently fall out of the normal ranges.

Response to reviewer 2 (Highlight in pink)

*HemoCue data in resource limited conditions is not mentioned and the differences in settings not mentioned e.g. storage of cuvettes once opened, Is there a reduced shelf life?*

**Response:** Storage of the cuvettes is done at room temperature. Once opened, the cuvettes must be tightly closed and stored at the same conditions. The cuvettes, once opened have a shelf life of three months. The quality of the cuvettes and for that matter their shelf life are affected only when they are exposed to the atmospheric conditions when the container is loosely closed or are left opened for a long time. In either case, water is absorbed and that can affect the quality and reduce the shelf life of the cuvettes (HemoCue Portable Photometer; lines 3-5).

What challenges are present when using the HemoCue in a resource limited setting?

**Response:** Proper use of the HemoCue is the heaviest challenge; however, with proper training this can be solved. (Discussion, last paragraph, page 12, lines 4-5 and 7-10)
As the HemoCue cuvettes are capable of being used for capillary blood. The comparability of capillary and venous blood should be highlighted and referenced.

**Response:** Our study only concentrated on venous EDTA samples but not capillary EDTA samples. We were not able to compare the results of these two samples.

Response to editorial comments (Highlight in yellow)

*Ensure the abstract of your study is less than 350 words*

**Response:** Abstract has been reduced to less than 350 words.

Document, within your manuscript, whether you received informed parental consent and whether this was verbal or written.

**Response:** Manuscript has been updated accordingly (Ethical Approval; lines 2-5)