seconds[13], this was documented by this study. Similar results were also described by Karsan et al (1993)[11].

Repeated measurement of freshly prepared Hb-SLS during the first 120 mints after dilution shows no significant differences, (Figure 1). These findings were consistent with the findings of Lewis (1991) whose found that repeated measurements of freshly prepared solution of Hb-SLS during the first 2 hr, after dilution shows no significant differences.

Correlation coefficient (r) was 0.999 (Table 1and figure 2), in which there were some instrument differences, but no significant discrepancy for linearity. Lewis (1991) found that there was a direct relationship of absorbance to Hb concentration over awid range of measurements with (r) of 1.000[13].Similar results were encountered in this study.

Mean Hb (g/L) by SLS method was 116.9 $\pm$ 31.03 while mean Hb (g/L) by the HiCN method was 116.84 $\pm$ 31.13, with correlation coefficient of 0.998, (Table 2 and figure 3). Lewis (1991) found that there is a strong correlation between HiCN method and SLS method in measurement of Hb on routine blood specimens with a correlation coefficient of 0.998[13]. This was documented by this study. The same findings were also reported by Tsuda, Ntatsumi (1998) with correlation coefficient of 0.998[10]. The effect of high leucocyte count is illustrated in table 3 and figure4).

The differences from reference method carried out on washed red cells samples[18], showed no significant difference in measurement of Hb by SLS method and HiCN method. The findings of Lewis et al (1991) were not confirmed in this study, this may be due to the use of washed RBCs indicated the measurement of Hb by SLS method is less affected than HiCN method by the leucocytes[13].

The findings of Lewis (1991) did not confirmed by this study, this may be due to use washed RBC rather than centrifuged / filtered samples, because of unavailability of filters in Iraq.

Mean Hb (g/L) by SLS method was (101.73 $\pm$ 25.35 uncorrected and 96.26 $\pm$ 24.62 corrected), and by HiCN method was (103.8 $\pm$ 25.44 uncorrected and 98.86 $\pm$ 24.49 corrected) (Table 4). This findings was consistent with those of Lewis (1991) who founds that the SLS method was slightly more reliable on measurement of Hb when there's interference substance like lipaemia or WBC[13]. This was confirmed by this study.

Mean Hb (g/L) by SLS method was 158.62 $\pm$ 21.47 and by HiCN method was 158.85 $\pm$ 21.59, with correlation coefficient (r) of 0.995. There was no significant difference between SLS method and HiCN method on measurement on samples containing HbF (Table 5 and figure 5).

Lewis found that there was no difference on measurement of sample containing HbF by SLS and HiCN, with correlation coefficient of 0.993[13]. Similar results were encountered in this study.

Mean of Hb (g/L) by SLS method was 115.25$\pm$33.01 and by HiCN method was 115.08 $\pm$ 32.74 with correlation coefficient of 0.999 (Table 6 and figure 6). The findings of Lewis et al (1991) were confirmed in this study[13] in which there was no significant difference in measurement of methaemoglobin by SLS and HiCN methods[13].

Conclusions

The measurement of Hb by sodium lauryl sulfate showed:

1. It is non-toxic substance.
2. Hb converts almost instantaneously.
3. There is a direct relationship of absorbance to Hb concentration over a wide range of measurements.
4. It is stable for 2 hours without significant effect.
5. It is reliability is equal to that of haemoglobinocyanid method.
6. Slightly more reliable method when there is interference by lipaemia.
7. Measures Hb containing high concentration of HbF and methaemoglobin.