Ferroin Photometry by Smart Phone Camera and Application.

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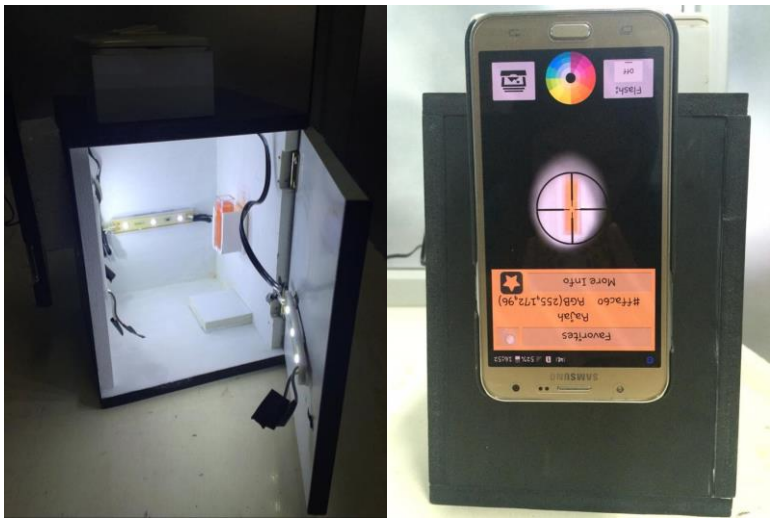
A simple photometer was constructed from a Samsung Galaxy J7 smart-phone and an LED light source in a hand-held box, using the *Color Capture & Identifier* Android application for red (R), green (G) and blue (B) measurements, to determine iron(II) concentration as the ferroin complex. The linear range was 0.60-4.00 mg/L, the limit of detection was 0.586 mg/L and the limit of quantitation was 0.773 mg/L. Precision varied from 1.4% to 2.9% RSD, and the relative error from 0.5% to 3%, which is comparable to a laboratory spectrometer with 0.05% RSD and 1.6% relative error.



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