Accuracy of the CONTOUR® Blood Glucose Monitoring System

Bern Harrison, B.A., Cheryl Leazenby, B.S., and Solveig Halldorsdottir, Ph.D.

Abstract

Objective:
The aim of the study was to assess the accuracy of the CONTOUR® blood glucose monitoring system (BGMS) according to the International Organization for Standardization's International Standard 15197 (ISO 15197:2003) guidelines and to more stringent criteria.

Method:
Finger stick blood samples from 105 subjects with diabetes (25 with type 1, 77 with type 2, and 3 with type unknown) were tested using the CONTOUR BGMS and YSI glucose analyzer.

Results:
99.3% of results were within ISO 15197:2003 criteria (±15 mg/dl of YSI results at glucose concentrations <75 mg/dl and ±20% at glucose concentrations ≥75 mg/dl). Additionally, 96.7% of results were accurate according to more stringent criteria (±15 mg/dl of YSI results for glucose concentrations <100 mg/dl and ±15% for glucose concentrations ≥100 mg/dl). Error grid analysis showed that 99.3% and 0.7% of results were within zones A and B, respectively.

Conclusion:
The CONTOUR BGMS exceeded both the minimum acceptable accuracy based on ISO 15197:2003 and the more stringent accuracy criteria.