Accuracy and precision of the i-STAT portable clinical analyzer: An analytical point of view

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Abstract
The introduction of a new point-of-care testing (POCT) instrument into the market affects medical practice and laboratory services. The i-STAT is designed to improve the speed in the decision making of the medical profession. However, reliability of results would ensure the quality of laboratory data. We, therefore, made an evaluation of the performance of i-STAT using a disposable cartridge EG7+ which is capable of measuring pH, pO2, pCO2 (blood gas), Sodium, Potassium (Electrolytes), Ionized calcium and Hematocrit with only 10 μl of lithium heparinized blood in 2 minutes. The results were compared with those obtained from routine methods. The results were found to be accurate, precise and correlated with acceptable methods used routinely in the laboratory.

Keywords: Blood Gas; Electrolytes; i-STAT; Ionized Calcium; Point-Of-Care Testing

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