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ORIGINAL ARTICLES

Half-Unit Dose Accuracy with HumaPen® Luxura™ HD: An Insulin Pen for Patients Who Need Precise Dosing

Paula E. Clark, M.S.N., R.N.C., F.N.P., Charles R. Okenfuss, M.S., and Margaret Campbell, B.S.

Abstract

Background:

The HumaPen® Luxura™ HD insulin pen (Eli Lilly and Company, Indianapolis, IN) was originally designed to deliver accurate doses in half-unit increments from 1 to 30 units. Laboratory testing examined the accuracy of the initial 0.5-unit dose within a 95/95% tolerance interval with respect to a specification of ±0.5 unit (±0.005 ml).

Methods:

After priming, operators recorded the first 0.5 unit. Data were analyzed using *k*-value targets.

Results:

While examining 577 half-unit doses per device lot, test temperature, operator, or test liquid, at least 95% of the doses were accurate with 95% confidence. All data points were within ±0.5 unit (±0.005 ml).

Conclusions:

Dose accuracy of the initial half-unit is achieved with the HumaPen Luxura HD insulin pen.

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Author Affiliation: Eli Lilly and Company, Indianapolis, Indiana

Abbreviations: (DAGF) dose accuracy glide force test system, (ILPS) insulin lispro protamine suspension, (ISO) International Organization for Standardization, (RT) room temperature, (V&S) vial and syringe

Keywords: accuracy, diabetes, half-unit dose, HumaPen Luxura HD, insulin pen

Corresponding Author: Paula E. Clark, M.S.N., R.N.C., F.N.P., Eli Lilly and Company, Indianapolis, IN 46285; email address *clark_paula_e@lilly.com*