

Contains Nonbinding Recommendations

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Draft Guidance on Metformin Hydrochloride

October 2024

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Active Ingredient: Metformin hydrochloride

Dosage Form: Tablet

Route: Oral

Strengths: 500 mg, 850 mg, 1 gm

Recommended Study: One in vivo bioequivalence study with pharmacokinetic endpoints

1. Type of study: Fed
Design: Single-dose, two-treatment, two-period crossover in vivo
Strength: 1 gm
Subjects: Healthy males and non-pregnant, non-lactating females
Additional comments: Monitor blood glucose concentrations and signs and symptoms of hypoglycemia during the study. Implement appropriate hypoglycemia management protocol.

Analyte to measure: Metformin in plasma

Bioequivalence based on (90% CI): Metformin

Waiver request of in vivo testing: 500 mg and 850 mg strengths based on (i) acceptable bioequivalence study on the 1 gm strength, (ii) acceptable dissolution testing of all strengths, and (iii) proportional similarity in the formulations across all strengths

Dissolution test method and sampling times: The dissolution information for this drug product can be found in the FDA’s Dissolution Methods database, <http://www.accessdata.fda.gov/scripts/cder/dissolution/>. Conduct comparative dissolution testing on 12 dosage units for each of all strengths of the test product and reference listed drug (RLD).¹ Specifications will be determined upon review of the abbreviated new drug application.

Document History: Recommended July 2008; Revised October 2024

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¹ If the RLD is not available, refer to the most recent version of the FDA guidance for industry on *Referencing Approved Drug Products in ANDA Submissions*.