

*Contains Nonbinding Recommendations*

*Draft – Not for Implementation*

**Draft Guidance on Levofloxacin**

**October 2024**

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<b>Active Ingredient:</b>	Levofloxacin
<b>Dosage Form:</b>	Tablet
<b>Route:</b>	Oral
<b>Strengths:</b>	250 mg, 500 mg, 750 mg
<b>Recommended Studies:</b>	Two options: (1) Biopharmaceutics Classification System (BCS)-based biowaiver or (2) one in vivo bioequivalence study with pharmacokinetic endpoints

**I. Option 1: BCS Class I-based biowaiver**

A waiver request of in vivo testing for all the strengths of this product may be considered provided that the appropriate documentation regarding high solubility, high permeability and rapid dissolution as detailed in the most recent version of the FDA guidance for industry on *M9 Biopharmaceutics Classification System-Based Biowaivers<sup>a</sup>* is submitted in the application. Applicants may use the information contained in the approved labeling of the reference listed drug (RLD). Peer reviewed articles may not contain the necessary details of the testing for the Agency to make a judgment regarding the quality of the studies. A decision regarding the acceptability of the waiver request can only be made upon assessment of the data submitted in the application.

## II. Option 2: One in vivo bioequivalence study with pharmacokinetic endpoints

1. Type of study: Fasting  
Design: Single-dose, two-treatment, two-period crossover in vivo  
Strength: 750 mg  
Subjects: Healthy males and non-pregnant, non-lactating females  
Additional comments: None

**Analyte to measure:** Levofloxacin in plasma, using an achiral assay

**Bioequivalence based on (90% CI):** Levofloxacin

**Waiver request of in vivo testing:** 250 mg and 500 mg strengths based on (i) acceptable bioequivalence study on the 750 mg strength, (ii) acceptable in vitro 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 RLD.<sup>1</sup> Specifications will be determined upon review of the abbreviated new drug application.

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<sup>a</sup> For the most recent version of a guidance, check the FDA guidance website at <https://www.fda.gov/regulatory-information/search-fda-guidance-documents>.

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<sup>1</sup> 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*.