

**Draft Guidance on Amlodipine Besylate; Valsartan**

**October 2024**

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**Active Ingredients:** Amlodipine besylate; Valsartan

**Dosage Form:** Tablet

**Route:** Oral

**Strengths:** EQ 5mg Base; 160 mg, EQ 5 mg Base; 320 mg,  
EQ 10 mg Base; 160 mg, EQ 10 mg Base; 320 mg

**Recommended Studies:** Two in vivo bioequivalence studies with pharmacokinetic endpoints

1. Type of study: Fasting  
Design: Single-dose, two-treatment, two-period crossover in vivo  
Strength: EQ 10 mg Base; 320 mg  
Subjects: Healthy males and non-pregnant, non-lactating females  
Additional comments: Females of reproductive potential should use effective contraception during the study. Ensure an adequate washout period between treatments in the crossover study due to the long elimination half-life of amlodipine. Alternatively, a parallel study design may be considered.
2. Type of study: Fasting  
Design: Single-dose, two-treatment, two-period crossover in vivo  
Strength: EQ 10 mg Base; 160 mg  
Subjects: Healthy males and non-pregnant, non-lactating females  
Additional comments: See comments above.

**Analytes to measure:** Amlodipine and valsartan in plasma

**Bioequivalence based on (90% CI):** Amlodipine and valsartan

**Waiver request of in vivo testing:** EQ 5 mg Base;160 mg and EQ 5 mg Base; 320 mg strengths based on (i) acceptable bioequivalence studies on the EQ 10 mg Base;160 mg and EQ 10 mg Base; 320 mg strengths, (ii) acceptable in vitro dissolution testing of all strengths, and (iii) proportional similarity of 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).<sup>1</sup> Specifications will be determined upon review of the abbreviated new drug application.

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**Document History:** Recommended August 2008; Revised October 2024

**Unique Agency Identifier:** PSG\_021990

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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*.