

Draft Guidance on Erythromycin Ethylsuccinate

This draft guidance, when finalized, will represent the current thinking of the Food and Drug Administration (FDA, or the Agency) on this topic. It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations. To discuss an alternative approach, contact the Office of Generic Drugs.

Active Ingredient: Erythromycin ethylsuccinate

Dosage Form; Route: Granule; oral

Recommended Studies: Two studies

1. Type of study: Fasting
Design: Single-dose, two-treatment, two-period crossover in vivo
Strength: EQ 400 mg Base/5 mL
Subjects: Males and non-pregnant, non-lactating females, general population
Additional comments: Applicants may consider using a reference-scaled average bioequivalence approach for erythromycin ethylsuccinate. If using this approach, provide evidence of high variability in the pharmacokinetic parameters (i.e., within-subject variability $\geq 30\%$) of the reference product. For detailed information on this approach, refer to the guidance for progesterone oral capsules.

2. Type of study: Fed
Design: Single-dose, two-treatment, two-period crossover in vivo
Strength: EQ 400 mg Base/5 mL
Subjects: Males and non-pregnant, non-lactating females, general population
Additional comments: See comments above.

Analytes to measure: Erythromycin ethylsuccinate, and its active metabolite, erythromycin in plasma

Submit the erythromycin data as supportive evidence of comparable therapeutic outcome. For erythromycin, the following data should be submitted: individual and mean concentrations, individual and mean pharmacokinetic parameters, and geometric means and ratios of means for AUC and C_{max}.

Bioequivalence based on (90% CI): Erythromycin ethylsuccinate

Waiver request of in vivo testing: EQ 200 mg Base/5 mL based on (i) acceptable bioequivalence studies on the EQ 400 mg Base/5 mL, (ii) acceptable in vitro dissolution testing of both strengths, and (iii) proportional similarity of the formulations between both 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 both strengths of the test and reference products. Note that a dosage unit for a suspension is the labeled strength (5 mL). Specifications will be determined upon review of the abbreviated new drug application.