

Draft Guidance on Albuterol Sulfate

This draft guidance, when finalized, will represent the current thinking of the Food and Drug Administration (FDA, or the Agency) on this topic.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: Albuterol sulfate

Dosage Form; Route: Extended release tablet; oral

Recommended Studies: Two studies

1. Type of study: Fasting
Design: Single-dose, two-treatment, two-period crossover in vivo
Strength: EQ 8 mg Base
Subjects: Males and non-pregnant, non-lactating females, general population
Additional comments: None

2. Type of study: Fed
Design: Single-dose, two-treatment, two-period crossover in vivo
Strength: EQ 8 mg Base
Subjects: Males and non-pregnant, non-lactating females, general population
Additional comments: None

Analyte to measure (in appropriate biological fluid): Albuterol in plasma

Bioequivalence based on (90% CI): Albuterol

Additional strength: Bioequivalence of EQ 4 mg Base strength to the corresponding reference product strength may be demonstrated based on principles laid out in the FDA guidance on *Bioequivalence Studies with Pharmacokinetic Endpoints for Drugs Submitted Under an ANDA*.

Dissolution test method and sampling times: For modified-release drug products, FDA recommends that applicants develop specific discriminating dissolution methods. Applicants may also use the dissolution method set forth in any related official United States Pharmacopeia (USP) drug product monograph, or in the FDA's database (available at <https://www.accessdata.fda.gov/scripts/cder/dissolution/>), provided adequate dissolution data supporting the discriminating ability of such a method. If a new dissolution method is developed for the modified-release drug product, FDA recommends that the submission includes the dissolution methods development and validation report with the complete information/data supporting the proposed method. Conduct comparative dissolution testing on 12 dosage units for

each strength of the test and reference products. Specifications will be determined upon review of the abbreviated new drug application.

In addition to the method above, dissolution profiles on 12 dosage units for each of test and reference products generated using USP Apparatus I at 100 rpm and/or USP Apparatus II at 50 rpm in at least three dissolution media (pH 1.2, 4.5 and 6.8 buffer) should be submitted in the application. Agitation speeds may be increased if appropriate. It is acceptable to add a small amount of surfactant, if necessary. Include early sampling times of 1, 2, and 4 hours and continue every 2 hours until at least 80 % of the drug is released, to provide assurance against premature release of drug (dose dumping) from the formulation.