

**CENTER FOR DRUG EVALUATION AND
RESEARCH**

APPLICATION NUMBER:
40136

BIOEQUIVALENCY REVIEW(S)

OFFICE OF GENERIC DRUGS
DIVISION OF BIOEQUIVALENCE

ANDA/AADA # 40-176 SPONSOR: Luitpold
DRUG: Hydralazine Hcl
DOSAGE FORM: Injection
STRENGTH(s): 20 mg/mL
TYPE OF STUDY: Single/Multiple N/A Fasting/Fed
STUDY SITE: N/A

STUDY SUMMARY:

Waiver is granted based on
21 CFR 320.22(b)(1).

DISSOLUTION:

N/A

PRIMARY REVIEWER:

/S/

BRANCH: 10

INITIAL:

MLM

DATE: 6/13/97

BRANCH CHIEF:

BRANCH:

INITIAL:

/S/

DATE: 6/13/97

DIRECTOR

DIVISION OF BIOEQUIVALENCE

INITIAL:

/S/

DATE: 6/13/97

DIRECTOR

OFFICE OF GENERIC DRUGS

INITIAL:

DATE:

JAN 30 1996

Hydralazine Hydrochloride Injection
20 mg/mL
ANDA #40-136
Reviewer: Moheb H. Makary
WP. 40136W.295

Luitpold Pharmaceuticals
Shirley, NY
Submission Date:
February 17, 1995

Review of a Waiver Request

Objective:

The firm has requested a waiver of bioequivalence study requirements for its product Hydralazine Hydrochloride Injection, 20 mg/mL. Innovator product is Apresoline® Parenteral 20 mg/mL, manufactured by Ciba. Hydralazine Hydrochloride Injection is an antihypertensive available in a 1 mL vial for intravenous and intramuscular administration. The pH of the solution is Hydralazine HCl is a white to off-white, odorless crystalline powder. It is soluble in water, slightly soluble in alcohol, and very slightly soluble in ether.

Formulation Comparison : (Not to be released under FOI)

Hydralazine Hydrochloride Injection, 20 mg/mL

	<u>Test Product</u>	<u>Reference Product</u>
	<u>Per mL</u>	<u>Per mL</u>
<u>Ingredients</u>		
✓ Hydralazine Hydrochloride, USP	20 mg	20 mg
✓ Propylene Glycol, USP	103.6 mg	103.6 mg
✓ Methylparaben, NF	0.65 mg	0.65 mg
✓ Propylparaben, NF	0.35 mg	0.35 mg
Water for Injection, USP	qs	
Sodium Hydroxide, NF	for pH adjustment	
Hydrochloric Acid, NF	for pH adjustment	

Comments:

1. The active and inactive ingredients and their concentrations for the test product are the same as those of the innovator's Apresoline® hydrochloride Parenteral, 20 mg/mL, manufactured by Ciba.

2. Waiver of in vivo bioequivalence study requirements may be granted base on 21 CFR 320.22(b)(1).

Recommendation:

The Division of Bioequivalence agrees that the information submitted by Luitpold Pharmaceuticals, Inc., demonstrates that

Hydralazine Hydrochloride Injection, USP, 20 mg/mL falls under 21 CFR 320.22 (b)(1). The waiver of in vivo bioequivalence study for the test product is granted. From the bioequivalence point of view, the Division of Bioequivalence deems the test injectable formulation to be bioequivalent to Apresoline® Parenteral 20 mg/mL, manufactured by Ciba.

/S/

Moheb H. Makary, Ph.D.
Division of Bioequivalence
Review Branch III

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for
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Date: 1/30/96

Concur:

/S/

1/30/96

[Signature]

Date: _____

Keith Chan, Ph.D.
Director
Division of Bioequivalence