CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:

40253

CHEMISTRY REVIEW(S)

ANDA APPROVAL SUMMARY

ANDA: 40-253

DRUG PRODUCT: Ethosuximide Syrup

FIRM: Pharmaceutical Associates, Inc.

DOSAGE FORM: Syrup **STRENGTH:** 250 mg/5 ml

CGMP STATEMENT/EIR UPDATE STATUS: A signed cGMP certification is provided on page 142, Vol. 1.1. Acceptable EER 5/18/98, and update 7/21/00.

BIO STUDY: The bio-study waiver was found acceptable on 10/9/97.

METHOD VALIDATION - (DESCRIPTION OF DOSAGE FORM SAME AS FIRM'S): The drug product is not USP. Methods Validation was requested. No problems running or reproducing the assay method were found. Results for the impurity method are pending.

STABILITY - (ARE CONTAINERS USED IN STUDY IDENTICAL TO THOSE IN CONTAINER SECTION?): Accelerated and room temperature stability data support the proposed 18 month expiration date for the unit dose cups and the 24 month expiration date for the bottles. Containers used in the stability studies were identical to those described in the container section.

LABELING: See Approval Summary dated 9/22/00.

STERILIZATION VALIDATION (IF APPLICABLE): Not-applicable to this drug product.

SIZE OF BIO BATCH (FIRM'S SOURCE OF NDS OK?): See below

SIZE OF STABILITY BATCHES - (IF DIFFERENT FROM BIO BATCH, WERE THEY MANUFACTURED VIA THE SAME PROCESS?): Exhibit batch #13915 gallons) used for stability studies was manufactured with bulk drug substance from

PROPOSED PRODUCTION BATCH - (MANUFACTURING PROCESS THE SAME AS BIO/STABILITY?): The proposed production batch size is gallons. The manufacturing process described in the master production record is the same as that described in the exhibit batch record.

CHEMIST: Ruth Ganunis **DATE:** 11/7/00
SUPERVISOR: Richard Adams **DATE:** 11/9/00

1. CHEMISTRY REVIEW NO: 4a

2. ANDA # 40-253

3. NAME AND ADDRESS OF APPLICANT
Pharmaceutical Associates, Inc.
Attention: Ms. Kaye B. McDonald
P.O. Box 128
Conestee, SC 29636

4. LEGAL BASIS FOR SUBMISSION
The applicant certifies (p. 2), that to the best of their knowledge the patents referenced have expired. Also, no exclusivity exists for the listed drug Zarontin® syrup manufactured by Parke Davis (Division of Warner Lambert), as per the "Orange Book", 16th Edition.

6. PROPRIETARY NAME
N/A

7. NONPROPRIETARY NAME
Ethosuximide Syrup, 250 mg/5 mL

8. SUPPLEMENTS PROVIDED FOR
N/A

9. AMENDMENTS AND OTHER DATES

Firm

March 26, 1997--	Original Submission
May 21, 1997--	Amendment, response to RTF letter
April 23, 1998--	Amendment, Chemistry and Labeling
December 1, 1999--	Amendment, Chemistry and Labeling
June 8, 2000--	Amendment, Chemistry and Labeling
September 7, 2000--	Amendment, Labeling

FDA

May 1, 1997--	Refusal to file letter
June 2, 1997--	Communication to firm with date acceptable for filing as May 23, 1997
July 7, 1997--	Chemistry and labeling deficiencies
September 30, 1997-	Method validation results
October 9, 1997--	Bioequivalency status faxed out, acceptable
February 23, 1997--	Telecon by Julia Johnson/labeling comments
October 16, 1998--	Chemistry and Labeling deficiencies faxed out
March 17, 2000--	Labeling deficiencies
May 24, 2000--	Chemistry deficiencies
September 22, 2000-	Labeling, acceptable

10. PHARMACOLOGICAL CATEGORY
Control of absence epilepsy (Petit mal)

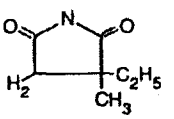
11. Rx or OTC
Rx

12. RELATED IND/NDA/DMF(S)

13. DOSAGE FORM
Syrup

14. POTENCY
250 mg/5 mL

15. CHEMICAL NAME AND STRUCTURE
Ethosuximide Syrup
(±)-2-Methyl-2-ethylsuccinimide
$C_7H_{11}NO_2$; M.W. = 141.17



16. RECORDS AND REPORTS
N/A

17. COMMENT
Drug substance DMF, acceptable 5/8/00
Labeling, acceptable 9/22/00
Biowaiver, acceptable 10/9/97
Review of flavoring, acceptable 10/27/00
EER, acceptable 5/18/98, update acceptable 7/21/00
Methods Validation, pending

18. CONCLUSIONS AND RECOMMENDATIONS
Approvable, methods validation pending.

19.

REVIEWER:	DATE COMPLETED:
R. Rajagopalan, Ph.D. (cycle #1)	(June 26, 1997)
R. Rajagopalan, Ph.D. (cycle #2)	(October 1, 1998)
R. Ganunis, Ph.D. (cycle #3)	(May 9, 2000)
R. Ganunis, Ph.D. (cycle #4)	July 12, 2000
R. Ganunis, Ph.D. (cycle #4a)	November 7, 2000