## **Approval Package for:**

# APPLICATION NUMBER: ANDA 65-184

Name:

Clindamycin Phosphate Topical Solution USP, 1% (base)

Sponsor:

Taro Pharmaceuticals U.S.A., Inc.

Approval Date:

March 31, 2004

# APPLICATION NUMBER: ANDA 65-184

### **CONTENTS**

## **Reviews / Information Included in this Review**

Approval Letter	X
Approvable Letter(s)	
Approved Labeling	X
Labeling Review(s)	X
Medical Review(s)	
Chemistry Review(s)	X
Bioequivalence Review(s)	X
Statistical Review(s)	
Microbiology Review(s)	
Administrative Document(s)	X
Correspondence	X

# APPLICATION NUMBER: ANDA 65-184

# **APPROVAL LETTER**

Taro Pharmaceuticals U.S.A, Inc. Attention: Kalpana Rao U.S. Agent for: Taro Pharmaceutical Industries Ltd. 5 Skyline Drive Hawthorne, NY 10532

#### Dear Madam:

This is in reference to your abbreviated new drug application (ANDA) dated June 16, 2003, submitted pursuant to Section 505(j) of the Federal Food, Drug, and Cosmetic Act (the Act), for Clindamycin Phosphate Topical Solution USP, 1% (base). We note that this product is subject to the exception provisions of Section 125(d)(2) of Title I of the Food and Drug Administration Modernization Act of 1997.

Reference is also made to your amendments dated January 22, February 13, February 23, March 16, March 26, and March 30, 2004.

We have completed the review of this abbreviated application and have concluded that the drug is safe and effective for use as recommended in the submitted labeling. Accordingly the application is approved. The Division of Bioequivalence has determined your Clindamycin Phosphate Topical Solution USP, 1% (base), to be bioequivalent and, therefore, therapeutically equivalent to the listed drug (Cleocin T<sup>®</sup> Topical Solution, 1% (base) of Pharmacia and Upjohn Co.).

Under Section 506A of the Act, certain changes in the conditions described in this abbreviated application require an approved supplemental application before the change may be made.

Post-marketing reporting requirements for this abbreviated application are set forth in 21 CFR 314.80-81 and 314.98. The Office of Generic Drugs should be advised of any change in the marketing status of this drug.

We request that you submit, in duplicate, any proposed advertising or promotional copy that you intend to use in your initial advertising or promotional campaigns. Please submit all proposed materials in draft or mock-up form, not final print.

Submit both copies together with a copy of the final printed labeling to the Division of Drug Marketing, Advertising, and Communications (HFD-40). Please do not use Form FD-2253 (Transmittal of Advertisements and Promotional Labeling for Drugs for Human Use) for this initial submission.

We call your attention to 21 CFR 314.81(b)(3) which requires that materials for any subsequent advertising or promotional campaign be submitted to our Division of Drug Marketing, Advertising, and Communications (HFD-40) with a completed Form FD-2253 at the time of their initial use.

incerely yours

Gary Buehler

Director

Office of Generic Drugs

Center for Drug Evaluation and Research

### APPEARS THIS WAY ON ORIGINAL

Son 3/22/04

ANDA 65-184 cc: Division File Field Copy HFD-610/R. West HFD-330 HFD-205

Endorsements:

HFD-643/S.Zuk/3/22/04

HFD-643/R.Adams/3/22/04

HFD-617/M.Anderson/3/22/04

HFD-613/M.Shin/3/22/04

HFD-613/L.Golson/3/22/04 JA Sol 3/24/04

V:\firmsnz\taro\ltrs&rev\65184apd.dqc F/T by: mda/3/22/04

APPROVAL

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# APPLICATION NUMBER: ANDA 65-184

## **APPROVED LABELING**

#### Clindamycin Phosphate Topical Solution, USP

PK-0000-0 000

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Rx only

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#### For External Use

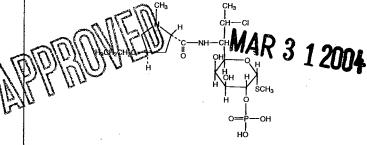
#### DESCRIPTION

Clindamycin Topical Solution contains clindamycin phosphate, USP, at a concentration equivalent to 10 mg clindamycin per milliliter.

Clindamycin phosphate is a water-soluble ester of the semi-synthetic antibiotic produced by a 7(S)-chloro-substitution of the 7(R)-hydroxyl group of the parent antibiotic lincomycin.

The solution contains isopropyl alcohol 39% w/v, propylene glycol, and purified water. May contain sodium hydroxide for pH balance.

The structural formula is represented below:



The chemical name for clindamycin phosphate is Methyl 7-chloro-6,7,8-trideoxy-6-(1-methyl-trans-4-propyl-L-2-pyrrolidinecarboxamido)-1-thio-L-threo- $(\alpha)$ -D-galacto-octopyranoside 2-(dihydrogen phosphate).

#### CUNICAL PHARMACOLOGY

Although clindamycin phosphate is inactive in vitro, rapid in vivo hydrolysis converts this compound to the antibacterially active clindamycin.

Cross resistance has been demonstrated between clindamycin and lincomycin.

Antagonism has been demonstrated between clindamycin and erythromycin.

Following multiple topical applications of clindamycin phosphate at a concentration equivalent to 10 mg clindamycin per mL in an isopropyl alcohol and water solution, very low levels of clindamycin are present in the serum (0-3 ng/mL) and less than 0.2% of the dose is recovered in urine as clindamycin.

Clindamycin activity has been demonstrated in comedones from acne patients. The mean concentration of antibiotic activity in extracted comedones after application of clindamycin topical solution for 4 weeks was 597 mcg/g of comedonal material (range 0-1490). Clindamycin in vitro inhibits all Propionibacterium acnes cultures tested (MICs 0.4 mcg/mL). Free fatty acids on the skin surface have been decreased from approximately 14% to 2% following application of clindamycin.

#### INDICATIONS AND USAGE

Clindamycin Topical Solution is indicated in the treatment of acne vulgaris. In view of the potential for diarrhea, bloody diarrhea and pseudomembranous colitis, the physician should consider whether other agents are more appropriate. (See **CONTRAINDICATIONS**, **WARNINGS** and **ADVERSE REACTIONS**.)

#### CONTRAINDICATIONS

Clindamycin Topical Solution is contraindicated in individuals with a history of hypersensitivity to preparations containing clindamycin or lincomycin, a history of regional enteritis or ulcerative colitis, or a history of antibiotic-associated colitis.



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WA BURNO

Orally and parenterally administered clindamycin has been associated with severe colitis which may result in patient death. Use of the topical formulation of clindamycin results in absorption of the antibiotic from the skin surface. Diarrhea, bloody diarrhea, and colitis (including pseudomembranous colitis) have been reported with the use of topical and systemic clindamycin.

Studies indicate a toxin(s) produced by clostridia is one primary cause of antibiotic-associated colitis. The colitis is usually characterized by severe persistent diarrhea and severe abdominal cramps and may be associated with the passage of blood and mucus. Endoscopic examination may reveal pseudomembranous colitis. Stool culture for Clostridium difficile and stool assay for C. difficile toxin may be helpful diagnostically.

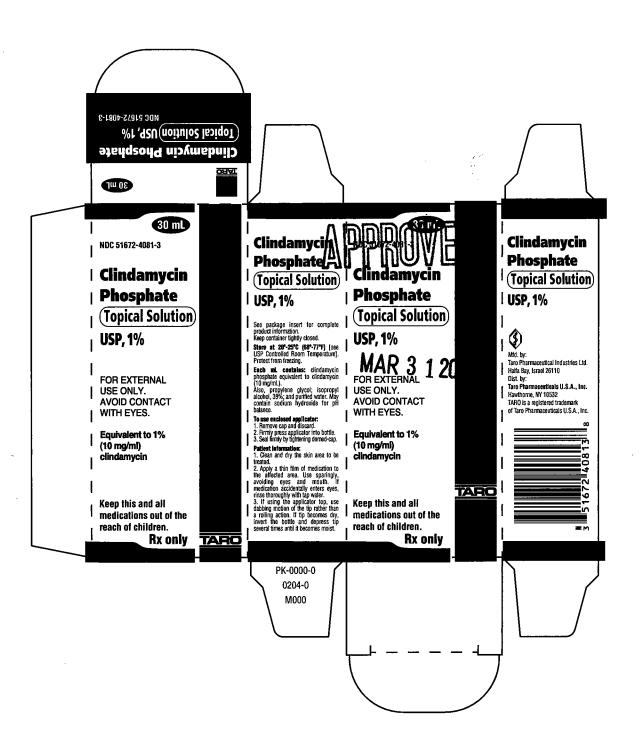
When significant diarrhea occurs, the drug should be discontinued. Large bowel endoscopy should be considered to establish a definitive diagnosis in cases of severe diarrhea.

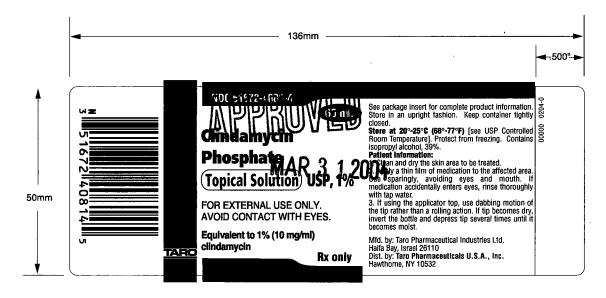
Antiperistatile agents such as opiates and diphenoxylate with atropine may prolong and/or worsen the condition. Vancomycin has been found to be effective in the treatment of antibiotic-associated pseudomembranous colitis produced by *Ciotridium difficile*. The usual aduit dosage is 500 milligrams to 2 grams of vancomycin orally per day in three to four divided doses administered for 7 to 10 days. Cholestyramine or colestipol resins bind vancomycin *in vitro*. If both a resin and vancomycin are to be administered concurrently, it may be advisable to separate the time of administration of each drug.

Diarrhea, colitis, and pseudomembranous colitis have been observed to begin up to several weeks following cessation of oral and parenteral therapy with clindamycin.

			PRECAU												
		-	event of ous amo	Clindamycin Topical Solution contains an alcohol base which will cause burning and irritation of the eye. In the event of accidental contact with sensitive surfaces (eye, abraded skin, mucous membranes), bathe with copi ous amounts of cool tap water. The solution has an unpleasant taste and caution should be exercised whe applying medication around the mouth.							opi-				
			Clindam	ycin should be pr	escribed with cau	tion in at	opic individu	ials.							
			Clindam	i <b>eractions</b> lycin has been sho uscular blocking a										•	
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			in 18 cli	E REACTIONS inical studies of v. s controls, patient low].											
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			Burnir Dryne	ng/Itching		60 105	(11) (19)		# 34	(-) (23)	# 29	(-) (18)			
			Erythe	ema		86	(16)		10	(7)	22	(14)			
			Peelin	ss/Oily Skin Ig		8 61	(1) (11)		<del>26</del>	(18) (-)	12* 11	(10) (7)	$\dashv$		
			# not red * of 126	corded s subjects											
•			Orally an	nd parenterally adr	ninistered clindam	ycin has	been associ	ated with	sever	re colitis v	vhich ma	y end fat	ally.		
			adverse	f diarrhea, bloody reactions in patier damycin (see <b>WAF</b>	nts treated with or										
			in associ	nal pain and gastro liation with the uso					e folli	culitis ha	ve also be	een repo	rted		
			Topically	SAGE applied clindamyo	in can be absorbed	l in suffic	ent amounts	to produc	e sys	temic effe	cts. (See	WARNIN	<b>6S</b> .)		
				AND ADMINISTR <i>I</i> thin film of Clinda		ution twi	ce daily to a	fected are	ea.						
			Keep all	liquid dosage for	ns in containers ti	ightly clo	sed.								
			clindamy 1 oz (30 2 oz (60 Store at	PPLIED  nycin Phosphate  ycin per milliliter is  mL) applicator be mL) applicator be 20°-25°C (68°-77  from freezing.	s available in the fottle ottle	ollowing NDC 5 NDC 5	sizes: 1672-4081-3 1672-4081-4	} }	cin pl	hosphate	equivaler	nt to 10	mg		
				Taro Pharmaceut Taro Pharmaceut											
			Issued: f	February, 2004											









# APPLICATION NUMBER: ANDA 65-184

# **LABELING REVIEW(S)**

#### REVIEW OF PROFESSIONAL LABELING DIVISION OF LABELING AND PROGRAM SUPPORT LABELING REVIEW BRANCH

ANDA Number:

ANDA 65-184

Date of Submission:

July 16, 2003 (Original draft labeling)

Applicant's Name:

Taro Pharmaceuticals U.S.A., Inc.

Established Name:

Clindamycin Phosphate Topical Solution, USP

Proposed Proprietary Name:

NONE

#### Labeling Deficiencies:

#### 1. GENERAL

Please revise your storage temperature recommendation as follows:

"Store at 20°-25°C (68°-77°F) [See USP Controlled Room Temperature]."

#### 2. CONTAINER

See comment under GENERAL

#### 3. CARTON

See comment under GENERAL

#### 4. PROFESSIONAL PACKAGE INSERT

- See comment under GENERAL
- Add the following subsection to the PRECAUTIONS section, after the Pediatric Use subsection:

Geriatric Use

Clinical studies for clindamycin did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients.

Please revise your labels and labeling, as instructed above, and submit in final print.

Prior to approval, it may be necessary to further revise your labeling subsequent to approved changes for the reference listed drug. We suggest that you routinely monitor the following website for any approved changes-

<a href="http://www.fda.gov/cder/cdernew/listserv.html">http://www.fda.gov/cder/cdernew/listserv.html</a>

To facilitate review of your next submission, and in accordance with 21 CFR 314.94(a)(8)(iv), please provide a side-by-side comparison of your proposed labeling with your last submission with all differences annotated and explained.

Wm. Peter Rickman

Director

Division of Labeling and Program Support

Office of Generic Drugs

Center for Drug Evaluation and Research

APPEARS THIS WAY ON ORIGINAL

#### **REVIEW OF PROFESSIONAL LABELING CHECKLIST**

	A 1986 A 1980	No	N.A.
Different name than on acceptance to file letter?		х	
Is this product a USP item? If so, USP supplement in which verification was assured.  USP 26	X		
ls this name different than that used in the Orange Book?		x	
If not USP, has the product name been proposed in the PF?			x
Error Prevention Analysis			
Has the firm proposed a proprietary name? If yes, complete this subsection.	*	х	
Do you find the name objectionable? List reasons in FTR, if so. Consider: Misleading? Sounds or looks like another name? USAN stem present? Prefix or Suffix present?			×
Has the name been forwarded to the Labeling and Nomenclature Committee? If so, what were the recommendations? If the name was unacceptable, has the firm been notified?			x
PACKAGING -See applicant's packaging configuration in FTR	ly and		124-200 120-200
s this a new packaging configuration, never been approved by an ANDA or NDA for this drug product? If yes, describe in FTR.		х	
s this package size mismatched with the recommended dosage? If yes, the Poison Prevention Act may require a CRC. [see FTR]		Х	
Does the package proposed have any safety and/or regulatory concerns?		Х	
f IV product packaged in syringe, could there be adverse patient outcome if given by direct IV injection?			x
Conflict between the DOSAGE AND ADMINISTRATION and INDICATIONS sections and the packaging configuration?		Х	
s the strength and/or concentration of the product unsupported by the insert labeling?		Х	
s the color of the container (i.e. the color of the cap of a mydriatic ophthalmic) or cap ncorrect?			x
ndividual cartons required? Issues for FTR: Innovator individually cartoned? Light sensitive product which might require cartoning? Must the package insert accompany the product?		x	
Are there any other safety concerns?		Х	
LABELING			
s the name of the drug unclear in print or lacking in prominence? (Name should be the most prominent information on the label).		х	
Has applicant failed to clearly differentiate multiple product strengths?			x

Is the corporate logo larger than 1/3 container label? (No regulation - see ASHP guidelines)		Х	
Does RLD make special differentiation for this label? (i.e., Pediatric strength vs Adult; Oral Solution vs Concentrate, Warning Statements that might be in red for the NDA)		х	
Is the Manufactured by/Distributor statement incorrect or falsely inconsistent between labels and labeling? Is "Jointly Manufactured by", statement needed?		х	
Failure to describe solid oral dosage form identifying markings in HOW SUPPLIED?		х	
Has the firm failed to adequately support compatibility or stability claims which appear in the insert labeling? Note: Chemist should confirm the data has been adequately supported.		Х	
Scoring: Describe scoring configuration of RLD and applicant (p. #) in the FTR			
Is the scoring configuration different than the RLD?		х	
Has the firm failed to describe the scoring in the HOW SUPPLIED section?		х	·
Inactive Ingredients: (FTR: List p. # in application where inactives are listed)			
Does the product contain alcohol? If so, has the accuracy of the statement been confirmed?	х		
Do any of the inactives differ in concentration for this route of administration?		Х	
Any adverse effects anticipated from inactives (i.e., benzyl alcohol in neonates)?		Х	
Is there a discrepancy in inactives between DESCRIPTION and the composition statement?		Х	
Has the term "other ingredients" been used to protect a trade secret? If so, is claim supported?		х	
Failure to list the coloring agents if the composition statement lists e.g., Opacode, Opaspray?		X	
Failure to list gelatin, coloring agents, antimicrobials for capsules in DESCRIPTION?			Х
Failure to list dyes in imprinting inks? (Coloring agents e.g., iron oxides need not be listed)		x	
USP Issues: (FTR: List USP/NDA/ANDA dispensing/storage recommendations)			
Do container recommendations fail to meet or exceed USP/NDA recommendations? If so, are the recommendations supported and is the difference acceptable?[see FTR]		Х	
Does USP have labeling recommendations? If any, does ANDA meet them?		Х	
Is the product light sensitive? If so, is NDA and/or ANDA in a light resistant container?		X	
Failure of DESCRIPTION to meet USP Description and Solubility information? If so, USP information should be used. However, only include solvents appearing in innovator labeling.		Х	
Bioequivalence Issues: (Compare bioequivalency values: insert to study. List Cmax, Tmax, T 1/2 and date study acceptable)			
Insert labeling references a food effect or a no-effect? If so, was a food study done?		Х	
Has CLINICAL PHARMACOLOGY been modified? If so, briefly detail where/why.		Х	

Patent/Exclusivity Issues: FTR: Check the Orange Book edition or cumulative supplement for verification of the latest Patent or Exclusivity. List expiration date for all		
patents, exclusivities, etc. or if none, please state. See FTR.		

#### Note to the Chemist:

The RLD, Cleocin T solution, contains Isopropyl Alcohol 50% and the generic product contains 39%. Please confirm that it's acceptable.

\*\*\* The reviewing chemist referred this question to the Biopharm Division and the bio review is still pending.

#### **FOR THE RECORD:**

#### 1. MODEL LABELING

This review was based on the labeling for Cleocin T Topical Solution, USP by Pharmacia & Upjohn INDA 50-537/S-026: Approved May 30, 2003.

#### 2. PATENTS/EXCLUSIVITIES

There are no unexpired patents or exclusivity for this product.

[Vol 1.1, page 9-12] .

#### 3. MANUFACTURING FACILITY OF FINISHED DOSAGE FORM

Taro Pharmaceutical Industries, Ltd. 14 Hakitor Street Haia Bay, 26110 Israel

[Vol. 1.1. page 166]

#### 4. CONTAINER/CLOSURE

Bottles: 30 mL & 60 mL	HDPE
Caps (Commercial) 24 mm White ————————————————————————————————————	Sealing Disk:
Caps (In-use):	

#### 5. INACTIVE INGREDIENTS

The description of the inactive ingredients in the insert labeling appears accurate according to the composition statement. [Vol. 1.1. page 73]

#### 6. PACKAGING CONFIGURATIONS

RLD:

30 mL and 60 mL bottles

ANDA:

30 mL and 60 mL bottles

#### 7. STORAGE TEMPERATURE RECOMMENDATIONS COMPARISON

RLD:

Store at controlled room temperature 20 to 25C (68 to 77F) [See USP]

ANDA:

Store at controlled room temperature 20 to 25C (68 to 77F) [See USP]

Recommendation: Store at 20-25C (68 –77F) [See USP Controlled Room Temperature].

#### 8. DISPENSING STATEMENTS COMPARISON

USP:

Preserve in tight containers

RLD:

Protect from freezing

ANDA:

Protect from freezing

Date of Review: 1/9/03

Date of Submission: July 16, 2003

Primary Reviewer:

Melaine Shin

Date:

Team Leader:

Lillie Golson

)até:

CC:

ANDA: 65-184 DUP/DIVISION FILE

HFD-613/MShin/LGolson (no cc)

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Review

#### APPROVAL SUMMARY **REVIEW OF PROFESSIONAL LABELING DIVISION OF LABELING AND PROGRAM SUPPORT** LABELING REVIEW BRANCH

ANDA Number: 65-184

Date of Submission: February 13, 2004

Applicant's Name: Taro Pharmaceuticals U.S.A., Inc.

Established Name: Clindamycin Phosphate Topical Solution, USP

APPROVAL SUMMARY (List the package size, strength(s), and date of submission for approval):

Do you have 12 Final Printed Labels and Labeling? Yes

CONTAINER LABELS - 30 mL and 60 mL

Satisfactory in FPL as of 2/13/04 submission

CARTON LABELS - 30 mL and 60 mL

Satisfactory in FPL as of 2/13/04 submission

PROFESSIONAL PACKAGE INSERT LABELING:

Satisfactory in FPL as of 2/13/04 submission

**REVISIONS NEEDED POST-APPROVAL: NONE** 

**BASIS OF APPROVAL:** 

Was this approval based upon a petition? No

What is the RLD on the 356(h) form: Cleocin T Topical Solution, USP

NDA Number: 50-537

NDA Drug Name: Cleocin T Topical Solution, USP

NDA Firm: Pharmacia & Upjohn

Date of Approval of NDA Insert and supplement #: S-026 / May 30, 2003

Has this been verified by the MIS system for the NDA?

Was this approval based upon an OGD labeling guidance?

#### **REVIEW OF PROFESSIONAL LABELING CHECKLIST**

Applicant's Established Name	Yes	No	N.A.
Different name than on acceptance to file letter?		х	
Is this product a USP item? If so, USP supplement in which verification was assured.  USP 26	x		
Is this name different than that used in the Orange Book?		х	
If not USP, has the product name been proposed in the PF?			х
Error Prevention Analysis			
Has the firm proposed a proprietary name? If yes, complete this subsection.		х	
Do you find the name objectionable? List reasons in FTR, if so. Consider: Misleading? Sounds or looks like another name? USAN stem present? Prefix or Suffix present?			×
Has the name been forwarded to the Labeling and Nomenclature Committee? If so, what were the recommendations? If the name was unacceptable, has the firm been notified?			x
PACKAGING -See applicant's packaging configuration in FTR			
Is this a new packaging configuration, never been approved by an ANDA or NDA for this drug product? If yes, describe in FTR.		Х	
Is this package size mismatched with the recommended dosage? If yes, the Poison Prevention Act may require a CRC. [see FTR]		Х	
Does the package proposed have any safety and/or regulatory concerns?		Х	
If IV product packaged in syringe, could there be adverse patient outcome if given by direct IV injection?			×
Conflict between the DOSAGE AND ADMINISTRATION and INDICATIONS sections and the packaging configuration?		Х	
Is the strength and/or concentration of the product unsupported by the insert labeling?		Х	
Is the color of the container (i.e. the color of the cap of a mydriatic ophthalmic) or cap incorrect?			x
Individual cartons required? Issues for FTR: Innovator individually cartoned? Light sensitive product which might require cartoning? Must the package insert accompany the product?		<b>X</b>	
Are there any other safety concerns?		Х	
LABELING			
Is the name of the drug unclear in print or lacking in prominence? (Name should be the most prominent information on the label).		Х	
Has applicant failed to clearly differentiate multiple product strengths?			x
Is the corporate logo larger than 1/3 container label? (No regulation - see ASHP guidelines)		Х	

ANDA 65-184 3

		,	<del>,</del>
Does RLD make special differentiation for this label? (i.e., Pediatric strength vs Adult; Oral Solution vs Concentrate, Warning Statements that might be in red for the NDA)		X	
Is the Manufactured by/Distributor statement incorrect or falsely inconsistent between labels and labeling? Is "Jointly Manufactured by", statement needed?		х	
Failure to describe solid oral dosage form identifying markings in HOW SUPPLIED?		х	
Has the firm failed to adequately support compatibility or stability claims which appear in the insert labeling? Note: Chemist should confirm the data has been adequately supported.		Х	
Scoring: Describe scoring configuration of RLD and applicant (p. #) in the FTR			
Is the scoring configuration different than the RLD?		х	
Has the firm failed to describe the scoring in the HOW SUPPLIED section?		х	
Inactive Ingredients: (FTR: List p. # in application where inactives are listed)			
Does the product contain alcohol? If so, has the accuracy of the statement been confirmed?	x		
Do any of the inactives differ in concentration for this route of administration?		Х	
Any adverse effects anticipated from inactives (i.e., benzyl alcohol in neonates)?		Х	
Is there a discrepancy in inactives between DESCRIPTION and the composition statement?		Х	
Has the term "other ingredients" been used to protect a trade secret? If so, is claim supported?		x	
Failure to list the coloring agents if the composition statement lists e.g., Opacode, Opaspray?		x	
Failure to list gelatin, coloring agents, antimicrobials for capsules in DESCRIPTION?			Х
Failure to list dyes in imprinting inks? (Coloring agents e.g., iron oxides need not be listed)		х	
USP Issues: (FTR: List USP/NDA/ANDA dispensing/storage recommendations)			
Do container recommendations fail to meet or exceed USP/NDA recommendations? If so, are the recommendations supported and is the difference acceptable?[see FTR]		Х	
Does USP have labeling recommendations? If any, does ANDA meet them?		Х	
Is the product light sensitive? If so, is NDA and/or ANDA in a light resistant container?		Х	
Failure of DESCRIPTION to meet USP Description and Solubility information? If so, USP information should be used. However, only include solvents appearing in innovator labeling.		X	
Bioequivalence Issues: (Compare bioequivalency values: insert to study. List Cmax, Tmax, T 1/2 and date study acceptable)			
Insert labeling references a food effect or a no-effect? If so, was a food study done?		Х	
Has CLINICAL PHARMACOLOGY been modified? If so, briefly detail where/why.		Х	
Patent/Exclusivity Issues: FTR: Check the Orange Book edition or cumulative supplement for verification of the latest Patent or Exclusivity. List expiration date for all patents, exclusivities, etc. or if none, please state. See FTR.			

ANDA 65-184

#### FOR THE RECORD:

This submission was submitted in response to the NA letter and all the requested revisions were accurately made and it is satisfactory for approval.

#### 1. MODEL LABELING

This review was based on the labeling for Cleocin T Topical Solution, USP by Pharmacia & Upjohn [NDA 50-537/S-026: Approved May 30, 2003.

#### 2. PATENTS/EXCLUSIVITIES

There are no unexpired patents or exclusivity for this product.

[Vol 1.1, page 9-12]

#### 3. MANUFACTURING FACILITY OF FINISHED DOSAGE FORM

Taro Pharmaceutical Industries, Ltd. 14 Hakitor Street Haia Bay, 26110 Israel

[Vol. 1.1. page 166]

#### 4. CONTAINER/CLOSURE

Bottles: 30 mL & 60 mL	HDPE white '
Caps (Commercial) 24 mm White ————————————————————————————————————	Sealing Disk:
Caps (In-use):	

[Vol. 1.2. page 356]

#### 5. INACTIVE INGREDIENTS

The description of the inactive ingredients in the insert labeling appears accurate according to the composition statement. [Vol. 1.1. page 73]

#### 6. PACKAGING CONFIGURATIONS

30 mL and 60 mL bottles RLD:

30 mL and 60 mL bottles ANDA:

#### 7. STORAGE TEMPERATURE RECOMMENDATIONS COMPARISON

Store at controlled room temperature 20 to 25C (68 to 77F) [See USP]

ANDA:

Store at controlled room temperature 20 to 25C (68 to 77F) [See USP]

Recommendation: Store at 20-25C (68 –77F) [See USP Controlled Room Temperature].

#### 8. DISPENSING STATEMENTS COMPARISON

USP:

Preserve in tight containers

RLD:

Protect from freezing

ANDA: Protect from freezing

Date of Review: March 10, 2004

Date of Submission: February 13, 2004

Primary Reviewer:

Melaine Shin

Team Leader:

CC:

ANDA: 65-184 **DUP/DIVISION FILE** 

HFD-613/MShin/LGolson (no cc)

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Review

APPEARS THIS WAY ON ORIGINAL

# APPLICATION NUMBER: ANDA 65-184

# **CHEMISTRY REVIEW(S)**





## ANDA-65-184

Clindamycin Phosphate Topical Solution USP, 1%

Taro Pharmaceutical Industries Ltd.

Susan Zuk Chemistry Division II, OGD





# **Table of Contents**

Ta	ıble	e of Contents	2
Cl	hen	nistry Review Data Sheet	3
TI	ıe l	Executive Summary	7
I.	Re	ecommendations	7
	A.	Recommendation and Conclusion on Approvability	7
	В.	Recommendation on Phase 4 (Post-Marketing) Commitments, Agreements, and/or Risk Management Steps, if Approvable	7
II.	Su	mmary of Chemistry Assessments	
	A.	Description of the Drug Product(s) and Drug Substance(s)	7
	B.	Description of How the Drug Product is Intended to be Used	7
	C.	Basis for Approvability or Not-Approval Recommendation	8
III	. A	dministrative	8
	A.	Reviewer's Signature	8
	B.	Endorsement Block	8
	C.	CC Block	8
Cl	nen	nistry Assessment	9
I.	Re	eview Of Common Technical Document-Quality (Ctd-Q) Module 3.2:	
	S	DRUG SUBSTANCE [Name, Manufacturer]	
	P	DRUG PRODUCT [Name, Dosage form]	
	A	APPENDICES	
	R	REGIONAL INFORMATION	
II.	Re	view Of Common Technical Document-Quality (Ctd-Q) Module 1	•••••
	A.	Labeling & Package Insert	
	B.	Environmental Assessment Or Claim Of Categorical Exclusion	•••••
Ш		List Of Deficiencies To Be Communicated	



Chemistry Review Data Sheet

# **Chemistry Review Data Sheet**

- 1. ANDA 65-184
- 2. REVIEW #: 1
- 3. REVIEW DATE: 10/31/03
- 4. REVIEWER: Susan Zuk
- 5. PREVIOUS DOCUMENTS:

**Previous Documents** 

**Document Date** 

6. SUBMISSION(S) BEING REVIEWED:

Submission(s) Reviewed Original ANDA Document Date 7/16/03

7. NAME & ADDRESS OF APPLICANT:

Name: Taro Pharmaceutical Industries, Ltd.

Address: 14 Hakitor Street

Haifa Bay, Israel 26110

Representative: Kalpana Rao

US Agent's Address 5 Skyline Drive

Hawthorn, NY 10532

FAX (914) 593-0078



#### Chemistry Review Data Sheet

Telephone: (914) 345-9001

#### 8. DRUG PRODUCT NAME/CODE/TYPE:

- a) Proprietary Name: N/A
- b) Non-Proprietary Name (USAN): Clindamycin Phosphate Topical Solution, USP 1%
- 9. LEGAL BASIS FOR SUBMISSION: The legal basis for submission of the ANDA is the reference listed drug Cleocin T® Topical Solution manufactured by Pharmacia & Upjohn, NDA #50537.
- 10. PHARMACOL. CATEGORY: Antibiotic
- 11. DOSAGE FORM: Topical Solution
- 12. STRENGTH/POTENCY: 1% (10 mg/mL)
- 13. ROUTE OF ADMINISTRATION: Topical
- 14. Rx/OTC DISPENSED: \_\_X\_Rx \_\_\_OTC
- 15. SPOTS (SPECIAL PRODUCTS ON-LINE TRACKING SYSTEM):

\_\_\_\_SPOTS product – Form Completed

X Not a SPOTS product

16. CHEMICAL NAME, STRUCTURAL FORMULA, MOLECULAR FORMULA, MOLECULAR WEIGHT:

Clindamycin Phosphate. L-threo-α-galacto-Octopyranoside, methyl 7-chloro-6,7,8-trideoxy-6-[[(1-methyl-4-propyl-2-pyrrolidinyl)carbonyl]-amino]-1-thio-, 2-(dihydrogen phosphate), (2S-trans)-. C<sub>18</sub>H<sub>34</sub>ClN<sub>2</sub>O<sub>8</sub>PS. 504.97.



#### Chemistry Review Data Sheet

CAS # 24729-96-2.

#### 17. RELATED/SUPPORTING DOCUMENTS:

#### A. DMFs:

DMF #	TYPE	HOLDER	ITEM REFERENCED	CODE <sup>1</sup>	STATUS <sup>2</sup>	DATE REVIEW COMPLETED	COMMENTS
	П			3	A	9/25/03	G. Kang
	III		-	3, 4	A	4/18/96	K. Furnkranz
	Ш			3, 4	Α	4/29/02	R. Frankewich
	Ш			3, 4	A	4/3/01	P. Maturu
	m			3, 4	A	4/24/00	M. Sloan
	Ш			3, 4	A	8/25/99	D. Cummings
	III	「 \	\ _	3, 4	Α	5/28/03	D. Klein
	Ш	\	\ _	3, 4	A	7/18/02	A. Shaw
	Ш			3, 4	A	7/17/02	A. Shaw

<sup>&</sup>lt;sup>1</sup> Action codes for DMF Table:

1 – DMF Reviewed.

Other codes indicate why the DMF was not reviewed, as follows:

- 2-Type 1 DMF
- 3 Reviewed previously and no revision since last review
- 4 Sufficient information in application
- 5 Authority to reference not granted
- 6 DMF not available



#### Chemistry Review Data Sheet

7 – Other (explain under "Comments")

<sup>2</sup> Adequate, Inadequate, or N/A (There is enough data in the application, therefore the DMF did not need to be reviewed)

#### **B.** Other Documents:

DOCUMENT	APPLICATION NUMBER	DESCRIPTION

#### 18. STATUS:

CONSULTS/ CMC RELATED REVIEWS	RECOMMENDATION	DATE	REVIEWER
Microbiology	N/A		
EES	Acceptable	9/12/03	S. Adams
Methods Validation	N/A		
Labeling	Pending		
Bioequivalence	Pending		
EA	N/A		
Radiopharmaceutical	N/A		

#### 19. ORDER OF REVIEW

The appli	ication submis	sion(s) co	vered by this review was taken in the	date order of
			If no, explain reason(s) below:	



**Executive Summary Section** 

## The Chemistry Review for ANDA 65-184

### The Executive Summary

#### I. Recommendations

- A. Recommendation and Conclusion on Approvability: The application is not recommended for approval.
- B. Recommendation on Phase 4 (Post-Marketing) Commitments, Agreements, and/or Risk Management Steps, if Approvable: N/A

#### II. Summary of Chemistry Assessments

#### A. Description of the Drug Product(s) and Drug Substance(s)

The drug substance is Clindamycin Phosphate, a water soluble ester of the semi-synthetic antibiotic produced by 7(S)-chloro substitution of the 7(R)-hydroxyl group on lincomycin. In vivo hydrolysis converts it into active Clindamycin. Clindamycin Phosphate, USP is a white, crystalline, hygroscopic powder. It is soluble in water, slightly soluble in ethanol, sparingly soluble in acetone and insoluble in chloroform, benzene and ether.

The drug product is Clindamycin Phosphate Topical Solution USP, 1%. The product contains 1% drug substance, as Clindamycin, in an alcohol-based solution. The total Isopropyl Alcohol, USP content is 39% w/v. The other inactive ingredients are Propylene Glycol, USP, Purified Water, USP and Sodium Hydroxide, NF for pH adjustment.

The maximum batch size is — One exhibit batch was manufactured for the ANDA to — This was completely packaged into 30 cc and 60 cc bottles. The batch was placed on stability study at 40°C and 25°C. The proposed expiry is — months. The product is stable at room temperature.

#### B. Description of How the Drug Product is Intended to be Used

Clindamycin Phosphate Topical Solution USP, 1% is indicated for the topical treatment of acne vulgaris. The recommended usage is application of a thin film onto the affected area twice daily. The product is supplied in 1 oz and 2oz bottles with applicators.



#### **Executive Summary Section**

#### C. Basis for Approvability or Not-Approval Recommendation

The ANDA is not approvable due to deficiencies in the following sections:

- 1. composition statement
- 2. method validation
- 3. container/closure
- 4. stability

#### III. Administrative

A. Reviewer's Signature

B. Endorsement Block

C. CC Block

APPEARS THIS WAY ON ORIGINAL

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of trade secret and/or

confidential commercial

information from

CHEMISTRY REVIEW #/





#### Chemistry Assessment Section

B. In addition to responding to the deficiencies presented above, please note and acknowledge the following comments in your response:

Provide current data from your on-going stability study.

Sincerely yours,

Florence S. Fang
Director
Division of Chemistry II
Office of Generic Drugs
Center for Drug Evaluation and Research

APPEARS THIS WAY ON ORIGINAL



## **CHEMISTRY REVIEW**



## Chemistry Assessment Section

cc:

ANDA

ANDA DUP DIV FILE Field Copy

Endorsements (Draft and Final with Dates):

HFD-643/SZuk/10/31/03

Par Jul 11/13/03 properson 1/17/03 P. C. alones 11/14/02

HFD-643/RAdams/11/12/03

HFD-617/MAnderson/11/13/03

F/T by: mda /11/13/03

V:\FIRMSNZ\TARO\LTRS&REV\65184NA.R01

TYPE OF LETTER: NOT APPROVABLE - MINOR

**APPEARS THIS WAY** ON ORIGINAL





# ANDA 65-184

Clindamycin Phosphate Topical Solution USP, 1%

Taro Pharmaceutical Industries Ltd.

Susan Zuk Chemistry Division II, OGD





# **Table of Contents**

Ta	ıble	e of Contents	2
Table of Contents  Chemistry Review Data Sheet  The Executive Summary  I. Recommendations  A. Recommendation and Conclusion on Approvability  B. Recommendation on Phase 4 (Post-Marketing) Commitments, Agreements, and/or Risk Management Steps, if Approvable  II. Summary of Chemistry Assessments  A. Description of the Drug Product(s) and Drug Substance(s).  B. Description of How the Drug Product is Intended to be Used  C. Basis for Approvability or Not-Approval Recommendation.  III. Administrative  A. Reviewer's Signature  B. Endorsement Block  C. CC Block  Chemistry Assessment  I. Review Of Common Technical Document-Quality (Ctd-Q) Module 3.2:  S. DRUG SUBSTANCE [Name, Manufacturer]  P. DRUG PRODUCT [Name, Dosage form]  A. APPENDICES  R. REGIONAL INFORMATION  III. Review Of Common Technical Document-Quality (Ctd-Q) Module 1  A. Labeling & Package Insert  B. Environmental Assessment Or Claim Of Categorical Exclusion	3		
Tl	ıe l	Executive Summary	7
I.	Re	commendations	7
	A.	Recommendation and Conclusion on Approvability	7
	В.		7
II.	Su	mmary of Chemistry Assessments	7
	A.	Description of the Drug Product(s) and Drug Substance(s)	7
	B.	Description of How the Drug Product is Intended to be Used	7
	C.	Basis for Approvability or Not-Approval Recommendation	8
Ш	. Ą	dministrative	8
	A.	Reviewer's Signature	8
	B.	Endorsement Block	8
	C.	CC Block	8
Cl	ıen	nistry Assessment	9
I.	Re	view Of Common Technical Document-Quality (Ctd-Q) Module 3.2:	
	S	DRUG SUBSTANCE [Name, Manufacturer]	
	P	DRUG PRODUCT [Name, Dosage form]	
	A	APPENDICES	
	R	REGIONAL INFORMATION	
II.	Re	view Of Common Technical Document-Quality (Ctd-Q) Module 1	
	A.	Labeling & Package Insert	
	B.	Environmental Assessment Or Claim Of Categorical Exclusion	•••••
III.		List Of Deficiencies To Be Communicated	



Chemistry Review Data Sheet

# **Chemistry Review Data Sheet**

- 1. ANDA 65-184
- 2. REVIEW #: 2
- 3. REVIEW DATE: 3/17/04
- 4. REVIEWER: Susan Zuk
- 5. PREVIOUS DOCUMENTS:

Previous Documents
Original ANDA

**Document Date** 

7/16/03

6. SUBMISSION(S) BEING REVIEWED:

Submission(s) Reviewed Document Date

Amendment 1/22/04 response to deficiency letter 11/17/03

Telephone Amendment 2/23/04 response to telephone request for correction

Telephone Amendment 3/16/04 change in unknown Impurity spec based on supplier

7. NAME & ADDRESS OF APPLICANT:

Name: Taro Pharmaceutical Industries, Ltd.

Address: 14 Hakitor Street

Haifa Bay, Israel 26110

Representative: Kalpana Rao

# CDAER

## **CHEMISTRY REVIEW**



Chemistry Review Data Sheet

US Agent's Address 5 Skyline Drive

Hawthorn, NY 10532

FAX (914) 593-0078

Telephone: (914) 345-9001

	3.	DRUG	PRODU	UCT	NAME/	CODE/	TYPE
--	----	------	-------	-----	-------	-------	------

- a) Proprietary Name: N/A
- b) Non-Proprietary Name (USAN): Clindamycin Phosphate Topical Solution, USP 1%
- 9. LEGAL BASIS FOR SUBMISSION: The legal basis for submission of the ANDA is the reference listed drug Cleocin T® Topical Solution manufactured by Pharmacia & Upjohn, NDA #50537.
- 10. PHARMACOL. CATEGORY: Antibiotic
- 11. DOSAGE FORM: Topical Solution
- 12. STRENGTH/POTENCY: 1% (10 mg/mL)
- 13. ROUTE OF ADMINISTRATION: Topical
- 14. Rx/OTC DISPENSED: \_\_X\_Rx \_\_\_OTC
- 15. SPOTS (SPECIAL PRODUCTS ON-LINE TRACKING SYSTEM):

\_\_\_\_SPOTS product – Form Completed

X Not a SPOTS product

16. CHEMICAL NAME, STRUCTURAL FORMULA, MOLECULAR FORMULA, MOLECULAR WEIGHT:

# CMED

## **CHEMISTRY REVIEW**



## Chemistry Review Data Sheet

Clindamycin Phosphate. L-threo- $\alpha$ -galacto-Octopyranoside, methyl 7-chloro-6,7,8-trideoxy-6-[[(1-methyl-4-propyl-2-pyrrolidinyl)carbonyl]-amino]-1-thio-, 2-(dihydrogen phosphate), (2S-trans)-. C<sub>18</sub>H<sub>34</sub>ClN<sub>2</sub>O<sub>8</sub>PS. 504.97. CAS # 24729-96-2.

# 17. RELATED/SUPPORTING DOCUMENTS:

## A. DMFs:

DMF#	ТҮРЕ	HOLDER	ITEM REFERENCED	CODE	STATUS <sup>2</sup>	DATE REVIEW COMPLETED	COMMENTS
İ	П	\	1	3	A	2/4/04	G. Kang
	Ш			3, 4	A	4/18/96	K. Furnkranz
	Ш			3, 4	A	4/29/02	R. Frankewich
	Ш			3, 4	Α	4/3/01	P. Maturu
	Ш			3, 4	A	4/24/00	M. Sloan
	Ш	\		3, 4	Α	8/25/99	D. Cummings
	III	T \	\	3, 4	Α	5/28/03	D. Klein
	Ш	\		3, 4	Α	7/18/02	A. Shaw
	Ш			3, 4	Α	7/17/02	A. Shaw

<sup>&</sup>lt;sup>1</sup> Action codes for DMF Table:

Other codes indicate why the DMF was not reviewed, as follows:

<sup>1 -</sup> DMF Reviewed.

<sup>2-</sup>Type 1 DMF

<sup>3 -</sup> Reviewed previously and no revision since last review

# CDEP.

# **CHEMISTRY REVIEW**



## Chemistry Review Data Sheet

- 4 Sufficient information in application
- 5 Authority to reference not granted
- 6 DMF not available
- 7 Other (explain under "Comments")

## **B.** Other Documents:

DOCUMENT	APPLICATION NUMBER	DESCRIPTION
		·

# 18. STATUS:

CONSULTS/ CMC RELATED REVIEWS	RECOMMENDATION	DATE	REVIEWER
Microbiology	N/A		
EES	Acceptable	9/12/03	S. Adams
Methods Validation	N/A		
Labeling	Accepable	3/12/04	M. Shin
Bioequivalence	Acceptable	3/16/04	H. Nguyen
EA	N/A		
Radiopharmaceutical	N/A		

# 19. ORDER OF REVIEW

The appl	ication s	submission(s	) covered	by this review	was taken	in the date	order of
receipt.	X_Y	Yes N	o If n	o, explain reas	on(s) belov	v:	

<sup>&</sup>lt;sup>2</sup> Adequate, Inadequate, or N/A (There is enough data in the application, therefore the DMF did not need to be reviewed)



**Executive Summary Section** 

# The Chemistry Review for ANDA 65-184

# The Executive Summary

#### I. Recommendations

- A. Recommendation and Conclusion on Approvability: The application is recommended for approval.
- B. Recommendation on Phase 4 (Post-Marketing) Commitments, Agreements, and/or Risk Management Steps, if Approvable: N/A

# II. Summary of Chemistry Assessments

## A. Description of the Drug Product(s) and Drug Substance(s)

The drug substance is Clindamycin Phosphate, a water soluble ester of the semi-synthetic antibiotic produced by 7(S)-chloro substitution of the 7(R)-hydroxyl group on lincomycin. In vivo hydrolysis converts it into active Clindamycin. Clindamycin Phosphate, USP is a white, crystalline, hygroscopic powder. It is soluble in water, slightly soluble in ethanol, sparingly soluble in acetone and insoluble in chloroform, benzene and ether.

The drug product is Clindamycin Phosphate Topical Solution USP, 1%. The product contains 1% drug substance, as Clindamycin, in an alcohol-based solution. The total Isopropyl Alcohol, USP content is 39% w/v. The other inactive ingredients are Propylene Glycol, USP, Purified Water, USP and Sodium Hydroxide, NF for pH adjustment.

The maximum batch size is \_\_\_\_\_\_. One exhibit batch was manufactured for the ANDA to produce \_\_\_\_\_ This was completely packaged into 30 cc and 60 cc bottles. The batch was placed on stability study at 40°C and 25°C. The proposed expiry is \_ months. The product is stable at room temperature.

# B. Description of How the Drug Product is Intended to be Used

Clindamycin Phosphate Topical Solution USP, 1% is indicated for the topical treatment of acne vulgaris. The recommended usage is application of a thin film onto the affected area twice daily. The product is supplied in 1 oz and 2oz bottles with applicators.

## **CHEMISTRY REVIEW**



## **Executive Summary Section**

## C. Basis for Approvability or Not-Approval Recommendation

Approval is recommended once labeling is acceptable and a bio-waiver is granted.

The following support approval:

- DMF for API is adequate
- EER acceptable
- Chemistry, manufacturing and controls are acceptable

## III. Administrative

A. Reviewer's Signature

**B.** Endorsement Block

Susan Zuk/3/17/04

Richard Adams/3/19/04

Mark Anderson/3/19/04

C. CC Block

APPEARS THIS WAY
ON ORIGINAL

R.c. adams 3/22/04

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information from

CHEMISTRY REVIEW # 2



# **CHEMISTRY REVIEW**



Chemistry Assessment Section

30. MICROBIOLOGY

N/A

31. SAMPLES AND RESULTS/METHODS VALIDATION STATUS

N/A

32. LABELING - Satisfactory

Labeling is acceptable per review dated 3/12/04.

33. ESTABLISHMENT INSPECTION Satisfactory

The manufacturing facility and API supplier are acceptable as of 9/12/03.

34. BIOEQUIVALENCE - Satisfactory

A waiver was requested due to topical use only. Division of Bioequivalence has granted the waiver per review dated 3/16/04.

35. ENVIRONMENTAL IMPACT CONSIDERATIONS/CATEGORICAL EXCLUSION: N/A

APPEARS THIS WAY ON ORIGINAL



# **CHEMISTRY REVIEW**



## **Chemistry Assessment Section**

cc:

ANDA

ANDA DUP DIV FILE

Field Copy

Endorsements (Draft and Final with Dates):

HFD-643/SZuk/3/17/04

HFD-643/RAdams/3/19/04

3. c. adams 3/24/04

FT by: mda/3/19/04

V:\FIRMSNZ\TARO\LTRS&REV\65184AP.R02

TYPE OF LETTER: ANDA APPROVAL

APPEARS THIS WAY ON ORIGINAL

# CENTER FOR DRUG EVALUATION AND RESEARCH

# APPLICATION NUMBER: ANDA 65-184

# **BIOEQUIVALENCE REVIEW(S)**

# DIVISION OF BIOEQUIVALENCE REVIEW

**ANDA No.** 65-184

Drug Product Name Clindamycin Phosphate Topical Solution USP

Strength 19

**Applicant Name** Taro Pharmaceutical Industries Ltd.

Address Haifa, Israel (Agent: Taro Pharmaceuticals USA, Hawthorn,

NY)

Submission Date(s) July 16, 2003

Amendment Date(s)

Reviewer Hoainhon Nguyen

First Generic No

File Location V:\firmsnz\taro\ltrs&rev\65184w0703.doc

#### I. Executive Summary

The firm has requested a waiver of *in vivo* bioequivalence requirements for its Clindamycin Phosphate Topical Solution USP, 1%. The test formulation contains the same active and inactive ingredients as the RLD product, Cleocin T® Topical Solution, 1%, except for Propylene Glycol. The amount of Propylene Glycol in the test formulation, \_\_\_\_\_\_ is \_\_\_\_ greater than that in the RLD formulation. However, the amount of Propylene Glycol has been found to exceed that of the RLD product in several approved ANDA's. The amount of Propylene Glycol in the current test product, therefore, is considered not to affect the safety of the test product. The formulation is found acceptable per 21 CFR 314.94 (a)(9)(v). The biowaiver requests for the test products are granted per CFR 320.22 (b) (3). The application is acceptable with no deficiencies.

#### II. Table of Contents

I.	Executive Summary	I
II.	Executive Summary	1
и. Ш.	Submission Summary	2
Α	Drug Product Information	2
В	PK/PD Information (Source: csi.micromedex.com)	2
C	Contents of Submission	3
D		3
Ε.	In Vivo Studies N/A	3
F.	Formulation	
G	. In Vitro Dissolution N/A	3
H	Waiver Request(s)	3
· I.	Comments	s
J.	Recommendations	4
IV.	Appendix	5
A	· · · · · · · · · · · · · · · · · · ·	5

## III. Submission Summary

## A. Drug Product Information

Test Product

Clindamycin Phosphate Topical Solution USP, 1%

Reference Product

Cleocin T® Topical Solution, 1%

**RLD Manufacturer** 

Pharmacia & Upjohn

NDA No.

50-537

**RLD Approval Date** 

07/09/1980

Indication

Indicated in the treatment of acne vulgaris.

## B. PK/PD Information (Source: csi.micromedex.com)

Bioavailability

Less than 5%. Detectable serum concentrations

usually were not achieved.

Food Effect

N/A

Tmax

Not available

Metabolism

Based on PK data from oral dosage form, clindamycin

is extensively metabolized in the liver to form

clindamycin sulfoxide and N-dimethyl clindamycin.

Excreted unchanged and metabolized in the urine

within 24 hours.

Half-life

Excretion

1.5 to 5 hours, based on PK data from oral dosage

form.

Relevant OGD or DBE History (NOT TO BE RELEASED UNDER FOI) Waiver requests have been granted in accordance with 21 CFR 320.22 (b)(3) for the following ANDA's: #

, 65-049 (Clay Park Lab; 06/24/99),, 64-159 (Fougera;
10/02/95)
It should be noted that several of the approved

It should be noted that several of the approved ANDA's contain the inactive ingredient of Propylene Glycol in an amount greater than that of the RLD product by more than 5%: #64-136 ( \_\_\_\_\_\_\_\_ % difference), 65-049 ( \_\_\_\_\_\_\_ % difference), 64-108 ( \_\_\_\_\_\_\_ % difference), 63-304 ( \_\_\_\_\_\_\_ % difference)

#### C. Contents of Submission

Study Types	Yes/No?	How many?
Single-dose fasting	No	
Single-dose fed	No	
Steady-state	No	
In vitro dissolution	No	
Waiver requests	Yes	1
BCS Waivers	No	
Vasoconstrictor Studies	No	
Clinical Endpoints	No	
Failed Studies	No	
Amendments		

# D. Pre-Study Bioanalytical Method Validation N/A

## E. In Vivo Studies N/A

#### F. Formulation

Location in appendix	SectionIV.A, Page 5
Are inactive ingredients within IIG limits?	Yes
If NO, list ingredients outside of limits	
If a tablet, is the product scored?	N/A
If yes, which strengths are scored?	
Is scoring of RLD the same as test?	
Is the formulation acceptable?	Yes
If not acceptable, why?	

# G. In Vitro Dissolution N/A

## H. Waiver Request(s)

Strengths for which waivers are requested	1%
Regulation cited	21 CFR 320.22 (b) (3)
Proportional to strength tested in vivo?	N/A
Is dissolution acceptable?	N/A
Waivers granted?	Yes
If not then why?	

## I. Comments

The content of Propylene Glycol in the test formulation is—% greater than that of the RLD product. However, the amount of Propylene Glycol has been found to exceed that of the RLD product in several approved ANDA's, (see Relevant OGD or DBE History on page 2 of this review). The amount of Propylene Glycol in the current test product,

therefore, is considered not to affect the safety of the proposed drug product. The formulation is found acceptable per 21 CFR 314.94 (a)(9)(v).

#### J. Recommendations

The Division of Bioequivalence agrees that the information submitted by Taro Pharmaceutical Industries demonstrates that its Clindamycin Phosphate Topical Solution USP, 1%, falls under 21 CFR 314.94 (a)(9)(v) of the Bioavailability/Bioequivalence Regulations. The Division of Bioequivalence recommends that the waiver of *in vivo* bioavailability study be granted per 21 CFR 320.22(b) (3). The test product, Taro's Clindamycin Phosphate Topical Solution USP, 1%, is deemed bioequivalent to the currently approved Cleocin T® Topical Solution, 1%, manufactured by Pharmacia & Upjohn.

Hoainhon Nguyen, Team I, Date Signed

Yih Chain Huang, Ph.D., Team leader, Team I, Date Signed

Backard Land 3/16/04

Dale P. Conner, Pharm. D.

Dale P. Conner, Pharm. D.

Director, Division of Bioequivalence

Office of Generic Drugs

HNguyen/02/13/04/v:\firmsnz\taro\ltrs&rev\65184w0703.doc

# IV. Appendix

#### A. Formulation Data

	Test		Reference
Ingredients	%v/v		%v/v
Clindamycin Phosphate USP	Eq. 1.000 base	Eq.	1.0 base
Isopropyl Alcohol USP	50 (39.24%w/v*)	50	
Propylene Glycol USP			_
Sodium Hydroxide NF			
Hydrochloric acid			\ _
Purified Water USP		1	_

<sup>\*</sup>Equivalent to 50% v/v (Specific gravity of 0.785)

Comments on the Test Formulation: The content of Propylene Glycol in the test formulation is — ½ greater than that of the RLD product. However, the amount of Propylene Glycol has been found to exceed that of the RLD product in several approved ANDA's, (see Relevant OGD or DBE History on page 2 of this review). The amount of Propylene Glycol in the current test product, therefore, is considered not to affect the safety of the proposed drug product. The formulation is found acceptable per 21 CFR 314.94 (a) (9) (v).

APPEARS THIS WAY ON ORIGINAL

#### BIOEQUIVALENCE COMMENTS

ANDA: 65-184 APPLICANT: Taro Pharmaceutical Industries, Ltd.

DRUG PRODUCT: Clindamycin Phosphate Topical Solution USP, 1%

The Division of Bioequivalence has completed its review and has no further questions at this time.

Please note that the bioequivalence comments provided in this communication are preliminary. These comments are subject to revision after review of the entire application, upon consideration of the chemistry, manufacturing and controls, microbiology, labeling, or other scientific or regulatory issues. Please be advised that these reviews may result in the need for additional bioequivalence information and/or studies, or may result in a conclusion that the proposed formulation is not approvable.

Sincerely yours,

Dale P. Conner, Pharm. D.

Director, Division of Bioequivalence

Office of Generic Drugs

Center for Drug Evaluation and Research

```
ANDA 65-184
CC:
      ANDA DUPLICATE
      DIVISION FILE
      HFD-652/ Bio Secretary - Bio Drug File
      HFD-652/ HNguyen
V:\firmsnz\taro\ltrs&rev\65184w0703.doc
Printed in final on / /00
Endorsements: (Final with Dates)
HFD-652/ HNguyen hr
HFD-652/ YHuang
HFD-617/A. Sigler
HFD-650/ D. Conner 329 3/16/04
BIOEQUIVALENCY - ACCEPTABLE
                             Submission Date: 07-16-03
                         010
Strength: 1%
1.
    WAIVER (WAI)
                                         Outcome: AC
      Outcome Decisions:
AC - Acceptable
```

APPEARS THIS WAY
ON ORIGINAL

# OFFICE OF GENERIC DRUGS DIVISION OF BIOEQUIVALENCE

	ANDA #: 65-184 SPONSOR: Taro Pharmaceutical Industries, Ltd. DRUG AND DOSAGE FORM: Clindamycin Phosphate Topical Solution USP STRENGTH(S): 1% TYPES OF STUDIES: N/A CINICAL STUDY SITE(S): N/A ANALYTICAL SITE(S): N/A								
STUDY SUMMARY: N/A DISSOLUTION: N/A. WAIVER REQUEST: Acceptable									
DSI INSPECTION STATUS									
	Inspection needed: NO	Inspection status:	Inspection results:						
First Generic No Inspection reque		Inspection requested: (date)							
	New facility	Inspection completed: (date)							
	For cause								
	Other								
PRIMARY REVIEWER: Hoainhon Nguyen BRANCH: I									
	INITIAL: MC		DATE: 3/16/04						
TEAM LEADER: Yih-Chain Huang BRANCH: I									
INITIAL:			DATE: 3/16/2004						
DIRECTOR, DIVISION OF BIOEQUIVALENCE: DALE P. CONNER, Pharm. D.									
	INITIAL: Garbay Monut DATE: 3/16/04								
	INITIAL: YOUNG VICTURE DATE: 5/16/04								

# CENTER FOR DRUG EVALUATION AND RESEARCH

# APPLICATION NUMBER: ANDA 65-184

# **ADMINISTRATIVE DOCUMENTS**

# RECORD OF TELEPHONE CONVERSATION

Susan Zuk and I called Kalpana Rao of Teva regarding their Clindamycin Phosphate Topical Solution application. We said the 11/17/03	<b>DATE:</b> 2/19/04	
amendment was under review and that we had the following concern:	ANDA NUMBER: 65-184	
	PRODUCT NAME: Clindamycin Phosphate Topical Solution USP	
Response can be sent as a telephone amendment to 301-594-1174.	FIRM NAME: TARO	
•	FIRM REPRESENTATIVE: Kalpana Rao	
	PHONE NUMBER: 914-345-9001 x 6298	
	FDA REPRESENTATIVES:	
V:\firmsnz\taro\telecons\65184.001	Susan Zuk Mark Anderson SIGNATURES:	
	Mark Anderson	

# **RECORD OF TELEPHONE CONVERSATION**

Richard Adams, Susan Zuk, and I called Kalpana Rao at Taro regarding their application for Clindamycin Phosphate Topical Solution. Ms. Rao had called previously and left a message that the firm had become aware that their API supplier had established a limit for individual unknown impurity of —%. Taro currently has a specification of —%. Ms. Rao indicated that the API supplier was unwilling to certify that the DS would meet Taro's tighter limit of —%. She asked if Taro could propose limits consistent with their API supplier.

Ms. Rao was unavailable to talk so Mr. Adams left a message stating that Taro could revise their API specification to include the unknown impurity limit of — % and submit a Telephone amendment.

DATE:

3/15/04

ANDA NUMBER:

65-184

PRODUCT NAME:

Clindamycin Phosphate Topical Solution USP, 1%

FIRM NAME:

Taro

FIRM REPRESENTATIVĖ:

Kalpana Rao

PHONE NUMBER:

914-345-9001 ex 6298

FDA REPRESENTATIVES:

Richard Adams
Susan Zuk
Mark Anderson

SIGNATURES:

Mark Orderson

Mark Anderson

V:\firmsnz\taro\telecons\65184.001

# **RECORD OF TELEPHONE CONVERSATION**

Susan Zuk called Kalpana Rao at Taro with regard to the firm's pending application for Clindamycin Phosphate Topical Solution.

She told the firm that it would be necessary to provide for the addition of weight loss to the stability protocol. The request was made by the Division Director.

The firm may submit response as a Telephone Amendment via FAX with hard copy to the application.

3/29/04: The firm submitted revised stability protocol but did not set a specification for weight loss so Susan Zuk and I called Kalpana Rao and asked that she provide for a specification.

The submission can again be sent as a Telephone Amendment.

DATE:

3/26/04 3/29/04

ANDA NUMBER:

65-184

#### PRODUCT NAME:

Clindamycin Phosphate Topical Solution 1%

#### FIRM NAME:

Taro
Pharmaceutical
Industries

# FIRM REPRESENTATIVE:

Kalpana Rao

#### PHONE NUMBER:

914-345-9001 x 6298

#### FDA REPRESENTATIVES:

Susan Zuk Mark Anderson

#### SIGNATURES:

Mark Anderson

V:\firmsnz\taro\telecons\65184.002

# CENTER FOR DRUG EVALUATION AND RESEARCH

# APPLICATION NUMBER: ANDA 65-184

# **CORRESPONDENCE**

July 16, 2003

Office of Generic Drugs CDER, Food & Drug Administration Metro Park North 7500 Standish Place, Room 150 Rockville, MD 20855



Re: ANDA for Clindamycin Phosphate Topical Solution USP, 1%

Dear Sir/Madam:

Taro Pharmaceutical Industries Ltd. ("Taro") submits today an original, abbreviated new drug application (ANDA) seeking approval to market Clindamycin Phosphate Topical Solution USP, 1% which is bioequivalent to the listed drug, Cleocin T<sup>®</sup> Topical Solution, manufactured by Pharmacia & Uphohn and pursuant to NDA 50-537.

This ANDA consists of 2 volumes. Taro is filing an archival copy (in blue folders) of the ANDA that contains all the information required in the ANDA, and a technical review copy (in red folders) which contains all the information in the archival copy with the exception of the Bioequivalence section (Section VI). A separate copy of the Bioequivalence waiver request is provided in the orange folder. In addition, a field copy for this ANDA is also submitted herewith (as Taro is located in Haifa Bay, Israel). Taro hereby certifies that the "field copy" is a true copy of the technical sections of the ANDA (also included is a copy of this letter, the 356h form and a certification that the contents are a true copy of those filed with the Office of Generic Drugs). This "field copy" is contained in burgundy folders. An additional three (3) copies of the method validation reports are included in a separate folder.

In accordance with the Patent Certification guidelines issued by the Agency, please refer to the signed Paragraph III Patent Certification (page 09).

Also, please find Taro's signed Generic Drug Enforcement Act of 1992 (page 749), and the "field copy" certification (page 751).

The Stability Commitment is located in Section XVI (page 719), and the signed certifications of compliance with current Good Manufacturing Practices is located in Section IX (page 170).

RECEIVED
JUL 1 7 2003
OGD/CDER

Please note, as per our authorization on page 745, that our US agent, Taro Pharmaceuticals U.S.A., Inc., can be contacted at the following address:

## Taro Pharmaceuticals U.S.A., Inc.

Five Skyline Drive Hawthorne, NY 10532

Tel.: 914-345-9001 Fax: 914-593-0078

Attn: Kalpana Rao

Thanking you for your prompt handling of this submission.

Sincerely,

Kalpana Rao

Vice President, Regulatory Affairs

Taro Pharmaceuticals U.S.A., Inc.

ME 28

Taro Pharmaceuticals U.S.A., Inc. U.S. Agent for: Taro Pharmaceutical Industries Ltd. Attention: Kalpana Rao 5 Skyline Drive Hawthorne, NY 10532

#### Dear Madam:

We acknowledge the receipt of your abbreviated new drug application submitted pursuant to Section 505(j) of the Federal Food, Drug and Cosmetic Act.

NAME OF DRUG: Clindamycin Phosphate Topical Solution USP, 1%

DATE OF APPLICATION: July 16, 2003

DATE (RECEIVED) ACCEPTABLE FOR FILING: July 17, 2003

We will correspond with you further after we have had the opportunity to review the application.

Please identify any communications concerning this application with the ANDA number shown above.

Should you have questions concerning this application, contact:

Thomas Hinchliffe Project Manager (301) 827-5849

Sincerely yours,

Wm Peter Rickman

Director

Division of Labeling and Program Support Office of Generic Drugs

Center for Drug Evaluation and Research

ANDA 65-184

DUP/Jackets cc:

HFD-600/Division File

Field Copy

HFD-610/G. Davis

HFD-92

Endorsement:

HFD-615/MShimer, Chief, RSB

HFD-615/PPatel, CSO AMA Word File V:\Filesnz\Tazo\ltrs&rev\65184.ACK
F/T 8/20/03 PM.

ANDA Acknowledgment Letter!

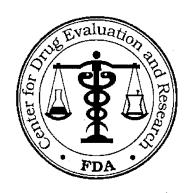
\_date 3/10/93

#### MINOR AMENDMENT

ANDA 65-184

DFFICE OF GENERIC DRUGS, CDER, FDA Document Control Room, Metro Park North II 7500 Standish Place, Room 150 Rockville, MD 20855-2773 (301-594-0320)

NOV 17 2003



APPLICANT: Taro Pharmaceutical Industries Ltd.

TEL: 914-345-9001 X 6298

ATTN: Kalpano Rao, U.S. Agent

FAX: 914-593-0078

FROM: Mark Anderson

PROJECT MANAGER: (301) 827-5737

Dear Madam:

This facsimile is in reference to your abbreviated new drug application dated July 16, 2003, submitted pursuant to Section 505(j) of the Federal Food, Drug, and Cosmetic Act for Clindamycin Phosphate Topical Solution USP, 1%.

The application is deficient and, therefore, Not Approvable under Section 505 of the Act for the reasons provided in the attachments ( pages). This facsimile is to be regarded as an official FDA communication and unless requested, a hard copy will not be mailed.

The file on this application is now closed. You are required to take an action described under 21 CFR 314.120 which will either amend or withdraw the application. Your amendment should respond to all of the deficiencies isted. Facsimiles or partial replies will not be considered for review, nor will the review clock be reactivated until all deficiencies have been addressed. The response to this facsimile will be considered to represent a MINOR AMENDMENT and will be reviewed according to current OGD policies and procedures. The designation as a MINOR AMENDMENT should appear prominently in your cover letter. You will be notified in a separate communication from our Division of Bioequivalence of any deficiencies identified during our review of your bioequivalence data. If you have substantial disagreement with our reasons for not approving this application, you may request an opportunity for a hearing.

#### SPECIAL INSTRUCTIONS:

Chemistry comments are provided. Labeling and bioequivalence comments will be provided when the reviews are done.

THIS DOCUMENT IS INTENDED ONLY FOR THE USE OF THE PARTY TO WHOM IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, OR PROTECTED FROM DISCLOSURE UNDER APPLICABLE LAW.

If received by someone other than the addressee or a person authorized to deliver this document to the addressee, you are hereby notified that any disclosure, dissemination, copying, or other action to the content of this communication is not authorized. If you have received this document in error, please immediately notify us by telephone and return it to us by mail at the above address.



Redacted \_\_\_\_ page(s)

of trade secret and/or

confidential commercial

information from

11/17/2003 FDA FAX



# **CHEMISTRY REVIEW**



## Chemistry Assessment Section

B. In addition to responding to the deficiencies presented above, please note and acknowledge the following comments in your response:

Provide current data from your on-going stability study.

Sincerely yours,

Florence S. Fang

Director

Division of Chemistry II

R.C. adams for

Office of Generic Drugs

Center for Drug Evaluation and Research



January 22, 2004

Mark Anderson, Project Manager
Office of Generic Drugs
Center for Drug Evaluation and Research
Food and drug Administration
Document Control Room, Metro Park North II
7500 Standish Place, Room 150
Rockville MD 20857

Re:

ANDA # 65-184

Clindamycin Phosphate Topical Solution USP, 1%

**Minor Amendment** 

Dear Mr. Anderson:

Chemistry Deficiencies:

Reference is made to Taro Pharmaceutical Industries Ltd.'s Abbreviated New Drug Application (ANDA) submitted on July16, 2003 under Section 506(j) of the Federal Food, Drug and Cosmetic Act for Clindamycin Phosphate Topical Solution USP, 1%. Reference is also made to a CMC deficiency letter dated November 17, 2003 in which the following deficiencies were provided:

Redacted 3 page(s)

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confidential commercial

information from

1/22/2004 TARO LETTER



Public Health Service
Center for Drug Evaluation and Research
Office of Generic Drugs
Division of Labeling & Program Support
Labeling Review Branch
Rockville, Maryland 20855

To:

Kalpano Rao, U.S. agent

DATE:

1/29/04

Fax:

914-593-0078

Phone: 914-345-9001 X6298

SUBJECT: ANDA 65-184 Clindamycin Phosphate Topical solution

From: Melaine Shin, R.Ph., Labeling Reviewer

**Phone:** (301) 827-5846

**Fax:** (301) 594-1174

Number of Pages:

(Including Cover Sheet)

Comments: Please send me a desk copy of your submission

responding to this letter.

Attention: Melaine Shin

Room E124

<sup>\*</sup>This document is intended only for the use of the party to whom it is addressed and may contain information that is privileged, confidential, and protected from disclosure under applicable law. If you are not the addressee, or a person authorized to deliver the document to the addressee, this communication is not authorized. If you have received this document in error, immediately notify us by telephone and return it to us at the above address by mail. Thank you.

#### REVIEW OF PROFESSIONAL LABELING DIVISION OF LABELING AND PROGRAM SUPPORT LABELING REVIEW BRANCH

ANDA Number:

ANDA 65-184

Date of Submission:

July 16, 2003 (Original draft labeling)

Applicant's Name:

Taro Pharmaceuticals U.S.A., Inc.

Established Name:

Clindamycin Phosphate Topical Solution, USP

Proposed Proprietary Name:

NONE

#### Labeling Deficiencies:

#### 1. GENERAL

Please revise your storage temperature recommendation as follows:

"Store at 20°-25°C (68°-77°F) [See USP Controlled Room Temperature]."

#### 2. CONTAINER

See comment under GENERAL

## 3. CARTON

See comment under GENERAL

#### 4. PROFESSIONAL PACKAGE INSERT

- See comment under GENERAL
- Add the following subsection to the PRECAUTIONS section, after the Pediatric Use subsection:

Geriatric Use

Clinical studies for clindamycin did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients.

Please revise your labels and labeling, as instructed above, and submit in final print.

Prior to approval, it may be necessary to further revise your labeling subsequent to approved changes for the reference listed drug. We suggest that you routinely monitor the following website for any approved changes-

<a href="http://www.fda.gov/cder/cdernew/listserv.html">http://www.fda.gov/cder/cdernew/listserv.html</a>

To facilitate review of your next submission, and in accordance with 21 CFR 314.94(a)(8)(iv), please provide a side-by-side comparison of your proposed labeling with your last submission with all differences annotated and explained.

Wm. Peter Rickman

Director

Division of Labeling and Program Support

Office of Generic Drugs

Center for Drug Evaluation and Research

APPEARS THIS WAY ON ORIGINAL

February 13, 2004



Office of Generic Drugs CDER, Food & Drug Administration Metro Park North 7500 Standish Place, Room 150 Rockville, MD 20855

ORIG AMENDMENT N/AF

Re:

ANDA 65-184

Clindamycin Phosphate Topical Solution USP, 1%

**Labeling Amendment** 

Dear Sir/Madam:

Reference is made to our Abbreviated New Drug Application (ANDA) for Clindamycin Phosphate Topical Solution USP, 1% submitted July 16, 2003, and to the labeling deficiency letter from the Agency on January 29, 2004 in which the following was noted:

1. GENERAL

Please revise your storage temperature recommendation as follows: "Store at  $20^{\circ}-25^{\circ}$ C (68 °-77°F) [see USP Controlled Room Temperature]."

2. CONTAINER

See comment under GENERAL

3. CARTON

See comment under GENERAL

- 4. PROFESSIONAL PACKAGE INSERT
- See comment under GENERAL
- Add the following subsection to the PRECAUTIONS section, after the Pediatric Use subsection:

Geriatric Use

Clinical studies for clindaniycin did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients.

RECEIVED FEB 1 7 2004 Please revise your labels and labeling, as instructed above, and submit in final print.

## Enclosed please find:

- 12 Final Printed 30 mL Bottle and Carton labels
- 12 Final Printed 60 mL Bottle and Carton labels
- 12 Final Printed Package Inserts

In addition, and in accordance with 21CFR 314.94(a)(8)(iv), we are providing a side-by-side comparison of our Package Insert with our last submission with all differences annotated and explained.

This concludes our response to the Agency's labeling deficiency letter of January 29, 2004.

Sincerely,

For Kalpana Rao

Vice President, Regulatory Affairs

Taro Pharmaceuticals U.S.A., Inc.

RECEIVED FEB 17 2004 OGD/CDER



February 23, 2004

Mark Anderson, Project Manager
Office of Generic Drugs
Center for Drug Evaluation and Research
Food and Drug Administration
Document Control Room, Metro Park North II
7500 Standish Place, Room 150
Rockville MD 20857

CHE MENDIEN

MAM

Re: ANDA # 65-184

Clindamycin Phosphate Topical Solution USP, 1%

**Telephone Amendment** 

Dear Mr. Anderson:

Reference is made to Taro Pharmaceutical Industries Ltd.'s (Taro) Abbreviated Drug New Application (ANDA) submitted on July 16, 2003 under Section 505 (j) of the Federal Food, Drug and Cosmetic Act for Clindamycin Phosphate Topical Solution USP, 1%. Reference is also made to a CMC deficiency letter dated November 17, 2003 and your telephone call on February 19, 2004 in which your requested the following:

Request:			-	
			•	
Response: The revised				
in attachment 1.				, is included
This concludes our resp	onse to the Agei	ncy telephone reques	st on February	19, 2004.
7 central con con				Annual States States

If you should have any questions regarding this submission, please contact the undersigned at  $(914)\ 345-9001\ x\ 6298$ .

Sincerely,

Kalpana Rao (U.S. Agent)

Vice President, Regulatory Affairs

March 16, 2004



Office of Generic Drugs CDER, Food & Drug Administration Metro Park North 7500 Standish Place, Room 150 Rockville, MD 20855

ORIG AMENDMENT

Re:

ANDA 65-184

Clindamycin Phosphate Topical Solution USP, 1%

**Gratuitous Amendment** 

Dear Sir/Madam:

Reference is made to our Abbreviated New Drug Application (ANDA) for Clindamycin Phosphate Topical Solution USP, 1% submitted July 16, 2003, and to the telephone call from Mark Anderson and Richard Adams on March 15, 2004 in which he requested the following:

# <u>C</u>

Comment:

Please revise your API specification to include the unknown impurity limit of NMT — %.

Response:

We have revised our API specification as indicated. Based upon the API limit for unknown impurities of NMT —% we are proposing a limit for our Finished Product Release and Stability specifications of NMT — % (our previous limit had been NMT —%). Please find these revised versions attached.

This concludes our response to the Agency's telephone call of March 15, 2004.

Sincerely,

Kalpana Rao (U.S. Agent)

Vice President, Regulatory Affairs

MAR 1 7 2004

UGD/CDER

March 26, 2004

Mark Anderson
Office of Generic Drugs
Food and Drug Administration
7500 Standish Place, Room 150
Rockville, MD 20855



RE: Clindamycin Phosphate Topical Solution USP, 1% ANDA 65-184

Telephone Amendment

Dear Wr. Anderson:

Reference is made to Taro Pharmaceuticals Industries, Ltd., Abbreviated New Drug Application submitted under Section 505(j) of the Food, Drug and Cosmetic Act for Clindamycin Phosphate Topical Solution USP, 1%. Reference is also made to the telephone request of Susan Zuk on March 26, 2004, in which the following request was made:

"Please commit to conduct weight loss testing during stability of validation batches and also to revise your stability protocol to indicate that weight loss testing will be conducted."

A revised stability commitment protocol is enclosed and the weight loss test has been added for the first three production lots.

This concludes our response to the telephone request of March 26, 2004.

If there are any questions, please do not hesitate to contact the undersigned at (914) 345-9001, ext. 6298.

Sincerely,

Kalpana Rao (U.S. Agent)

Vice President, Regulatory Affairs



March 30, 2004

Mark Anderson
Office of Generic Drugs
Food and Drug Administration
7500 Standish Place, Room 150
Rockville, MD 20855

RE: Clindamycin Phosphate Topical Solution USP, 1%

ANDA 65-184

Telephone Amendment

Dear Mr. Anderson:

Reference is made to Taro Pharmaceuticals Industries, Ltd., Abbreviated New Drug Application submitted under Section 505(j) of the Food, Drug and Cosmetic Act for Clindamycin Phosphate Topical Solution USP, 1%. Reference is also made to the telephone conversation of Mark Anderson and Susan Zuk on March 29, 2004 in which the following request was made:

"Please submit a specification for the weight loss test included in the stability commitment."

A revised stability commitment protocol was provided in a response dated March 26, 2004 and the specification for Clindamycin Phosphate Topical Solution USP, 1% including the weight loss test is enclosed. Taro's nomenclature for weight loss is the water loss rate test.

This concludes our response to the telephone request of March 30, 2004.

If there are any questions, please do not hesitate to contact the undersigned at (914) 345-9001, ext. 6298.

Sincerely,

Kalpana Rao (U.S. Agent)

Vice President, Regulatory Affairs