## **Approval Package for:**

APPLICATION NUMBER: NDA 021330/S-014 NDA 022360/S-005

Name: Nicorette® Lozenge (nicotine polacrilex)

**Sponsor:** GlaxoSmithKline Consumer Healthcare, L.P.

Approval Date: March 8, 2013

These "Changes Being Effected in 30 Days" supplemental new drug applications provide for the addition of two analytical testing sites for evaluation of the drug product and storage of stability samples.

# APPLICATION NUMBER: NDA 021330/S-014 NDA 022360/S-005

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Chemistry Review(s)	X
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APPLICATION NUMBER: NDA 021330/S-014 NDA 022360/S-005

## **APPROVAL LETTER**



Food and Drug Administration Silver Spring MD 20993

NDA 21330/ S-014 and 22360/ S-005

APPROVAL LETTER

GlaxoSmithKline Consumer Healthcare, L.P. Attention: Iris H. Shelton, M.S., RAC Associate Director, Regulatory Affairs 1500 Littleton Road, Parsippany NJ 07054-3884

Dear Ms. Shelton

Please refer to your Supplemental New Drug Applications (sNDA) submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act (FDCA) for the following:

NDA	Supplement	Drug Product	Dated	Received
21330	014	Nicorette® Lozenge	September 10,	September 10,
		(nicotine polacrilex)	2012	2012
22360	005	Nicorette® (nicotine	September 27,	September 27, 2012
		polacrilex)	2012	

These "Changes Being Effected in 30 Days" supplemental new drug applications provide for the addition of two analytical testing sites ( (b) (4) ) for evaluation of the drug product and storage of stability samples.

We have completed our review of these supplemental new drug applications. These supplements are approved.

We remind you that you must comply with the requirements for an approved NDA set forth under 21 CFR 314.80 and 314.81.

If you have any questions, call LCDR Luz E Rivera, Regulatory Project Manager, at (301) 796-4013.

Sincerely,

{See appended electronic signature page}

Ramesh Raghavachari, Ph.D. Branch Chief, Branch IX, Division of New Drug Quality Assessment III Office of New Drug Quality Assessment Center for Drug Evaluation and Research

Reference ID: 3273541

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/s/
RAMESH RAGHAVACHARI 03/08/2013

APPLICATION NUMBER: NDA 021330/S-014 NDA 022360/S-005

## **CHEMISTRY REVIEWS**

#### NDA 21-330, S-014 NDA 22-360, S-005

## DIVISION OF NEW DRUG QUALITY ASSESSMENT III POST-MARKETING, BRANCH IX

#### Review of Chemistry, Manufacturing, and Controls

**NDA #:** 21-330 **DATE REVIEWED:** 3/8/2013

**NDA #:** 22-360

OND: DNCE

**REVIEW#:** 1 **REVIEWER:** Donald N. Klein, Ph.D.

#### SUBMISSION TYPE DOCUMENT DATE CDER DATE

N21-330 CBE-30 9/10/12 9/10/12 N22-360 CBE-30 9/27/12 9/27/12

#### NAME & ADDRESS OF APPLICANT:

GlaxoSmithKline Consumer Healthcare, L.P. 1500 Littleton Road Parsippany, NJ 07054

#### **DRUG PRODUCT NAME:**

#### N21-330:

<u>Proprietary</u>: Nicorette<sup>®</sup> Lozenge

Established (1985): Nicotine Polacrilex, USP

#### N22-360:

Proprietary: Nicorette<sup>®</sup> Mini Lozenge

Established (1985): Nicotine Polacrilex, USP

**PHARMACOL. CATEGORY/INDICATION:** Reduction of withdrawal symptoms associated with quitting to smoke.

#### **DOSAGE FORM:**

**N21-330**: Lozenge

**N22-360**: Lozenge

**STRENGTHS**:

**N21-330**: 2 mg and 4 mg

**N22-360**: 2 mg and 4 mg

**ROUTE OF ADMINISTRATION:** Oral

**Rx/OTC**: OTC

**SPECIAL PRODUCTS:** Yes  $\underline{\mathbf{X}}$  No.

## <u>CHEMICAL NAME, STRUCTURAL FORMULA, MOLECULAR FORMULA, MOLECULAR WEIGHT:</u>

N21-330 and N22-360:

**Chemical Name:** 2-Propenoic acid, 2-methyl-, polymer with diethenylbenzene, complex with (*S*)-3-(1-methyl-2-pyrrolidinyl)pyridine

**Molecular Formula:**  $[(C_4H_6O_2)_x(C_{10}H_{10})_y](C_{10}H_{14}N_2)$ 

**MW:** *n/a* 

**CAS** #: 96055-45-7

**Chemical Structure:** 

**SUPPLEMENT PROVIDES FOR:** The addition of two analytical testing sites (FEI (b) (4) and FEI (b) (4) for evaluation of the drug product and storage of stability samples.

**CONCLUSION:** Recommend Approval.

#### **CMC REVIEW:**

#### **MODULE 3: QUALITY**

- 3.2.P DRUG PRODUCT [Nicorette® and Nicorette® Mini; Lozenge]:
- 3.2.P.2 PHARMACEUTICAL DEVELOPMENT [Nicorette® and Nicorette® Mini; Lozenge]:
- 3.2.P.2.2 Drug Product:
- 3.2.P.2.2.3 Physicochemical and Biological Properties:

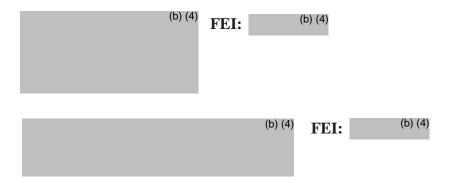
Attachment A: Nanotechnology product evaluating questions:

1, This review contains new information added to the table below:Yes; X No
Review date: _3/8/2013
2) Are any nanoscale materials included in this application? (If yes, please proceed to the next questions.)
Yes; No_X; Maybe (please specify)
res, res, respectively
3 a) What nanomaterial is included in the product? (Examples of this are listed as search terms in Attachment B.)
3 a) what hanomaterial is included in the product? (Examples of this are listed as search terms in Attachment B.)
2 h) What is the source of the nonematorial?
3 b) What is the source of the nanomaterial?
4) Is the nanomaterial a reformulation of a previously approved product?
v.
Yes No
5) What is the nanomaterial functionality?
Carrier; Excipient; Packaging
API; Other
6) Is the nanomaterial soluble (e.g., nanocrystal) or insoluble (e.g., gold nanoparticle) in an aqueous environment?
Soluble; Insoluble
7) Was particle size or size range of the nanomaterial included in the application?
Yes(Complete 8); No (go to 9).
(go to )).
8) What is the reported particle size?
Mean particle size; Size range distribution; Other
vican particle size, Size range distribution, Other
9) Please indicate the reason(s) why the particle size or size range was not provided:
9) Please indicate the reason(s) why the particle size of size range was not provided:
10) What other properties of the nanoparticle were reported in the application (See Attachment E)?
11) List all methods used to characterize the nanomaterial?

#### 3.2.P.3 MANUFACTURE [Nicorette® and Nicorette® Mini; Lozenge]:

#### 3.2.P.3.1 Manufacturers:

**a.** These two sites are added to N21-330 and N22-360 to conduct drug product testing (Assay; Content Uniformity; and Dissolution) and stability testing of the drug product:



#### **EVALUATION:** Acceptable.

**1.** Based on Compliance's Overall Recommendation, the proposed change meets 21 CFR 314.70(c).

#### N21-330, S-014 and N22-360, S-005

#### **FDA CDER EES ESTABLISHMENT EVALUATION REQUEST DETAIL REPORT**

Application: NDA 21330/014 Action Goal:

Stamp Date: 10-SEP-2012 03-FEB-2013 District Goal:

Regulatory: 10-MAR-2013

GLAXOSMITHKLINE CONS Applicant: **Brand Name:** Nicorette (nicotine polacrilex) lozenge

> 1500 LITTLETON RD Estab. Name:

PARSIPPANY, NJ 070543884 Generic Name: NICOTINE POLACRILEX

Priority: 3S Product Number; Dosage Form; Ingredient; Strengths 003; TROCHE; NICOTINE POLACRILEX; EQ 2MG BASE 001; TROCHE; NICOTINE POLACRILEX; EQ 2MG BASE 002; TROCHE; NICOTINE POLACRILEX; EQ 4MG BASE Org. Code: 560

Application Comment: PAC-ATLS; BUNDLED WITH N22-360, S-005 (on 12-OCT-2012 by D. KLEIN () 3017961689)

FDA Contacts: L. RIVERA Project Manager 3017964013

3017961739 K. RAMAN Team Leader

on 08-MAR-2013 Overall Recommendation: ACCEPTABLE by T. GOOEN (HFD-320) 3017963257

> PENDING on 12-OCT-2012 by EES\_PROD

March 8, 2013 1:48 PM

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#### N21-330, S-014 and N22-360, S-005

#### FDA CDER EES **ESTABLISHMENT EVALUATION REQUEST DETAIL REPORT**

FEI: (b) (4) CFN: Establishment:

(b) (4)

AADA:

DMF No: Responsibilities: FINISHED DOSAGE OTHER TESTER

TESTING FOR NICOTINE LOZENGE ASSAY, CONTENT UNIFORMITY, AND DISSOLUTION (on 17-SEP-2012 by L. RIVERA () 3017964013)

CONTROL TESTING LABORATORY

OAI Status: NONE Establishment

Comment:

Profile:

Milestone Name	Milestone Date	Request Type	Planned Completion	Decision	Creator
Comment	101	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Reason	
SUBMITTED TO OC	12-OCT-2012			3 9	KLEIND
SUBMITTED TO DO	16-OCT-2012	GMP Inspection			STOCKM
ASSIGNED INSPECTION TO IB	28-FEB-2013	Product Specific			PFIGAROL
DO RECOMMENDATION INSPECTION OF (b) (4)CLA	08-MAR-2013 SSIFIED NAI.			ACCEPTABLE INSPECTION	PFIGAROL
OC RECOMMENDATION	08-MAR-2013			ACCEPTABLE DISTRICT RECOR	TGOOEN MMENDATION
				DISTRICT RECO	MMENDATION

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#### N21-330, S-014 and N22-360, S-005 FDA CDER EES ESTABLISHMENT EVALUATION REQUEST **DETAIL REPORT**

Establishment:	CFN:		FEI:	(b) (4)		
			(b) (4)			
DMF No:			AADA:			
Responsibilities:	FINISHED DO	SAGE OTHER TES	TER			
Establishment Comment: Profile:	(HFD-320) 30				DISSOLUTION (on 19	I-OCT-2012 by M. STOCK
Milestone Name		Milestone Date	Request Type	Planned Completion	Decision	Creator
Comment					Reason	
SUBMITTED TO OC		12-OCT-2012				KLEIND
SUBMITTED TO DO		19-OCT-2012	Product Specific			STOCKM
ASSIGNED INSPECTI	ON TO IB	15-JAN-2013	Product Specific			LTHOMAS
INSPECTION PERFOR	RMED	(b) (4)		(b) (4)		TOMSS
INSPECTION PERFOR	RMED	(b) (4)		(b) (4)		TOMSS
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(b) (4) <sub>DI</sub>	STRICT OFFIC	E IS RECOMMENDI RESULTS OF THIS	NG THAT THIS AP	(b) (4	)	
DO RECOMMENDATION		22-FEB-2013	INST ECTION.		ACCEPTABLE	TOMSS
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				(b) (4	)	
(b) (4) <sub>DI</sub>	STRICT OFFICED UPON THE	E IS RECOMMENDI RESULTS OF THIS	NG THAT THIS AP	PLICATION BE		
OC RECOMMENDATION	ON	27-FEB-2013			ACCEPTABLE DISTRICT RECO	STOCKM MMENDATION

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/s/

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DONALD N KLEIN 03/08/2013 Approval Recommended; CBE-30 Due 3/10/13.

RAMESH RAGHAVACHARI 03/08/2013

APPLICATION NUMBER: NDA 021330/S-014 NDA 022360/S-005

## ADMINISTRATIVE and CORRESPONDENCE DOCUMENTS



Food and Drug Administration Silver Spring MD 20993

NDA 21330/ S-14

CBE-30 SUPPLEMENT – bACKNOWLEDGEMENT

GlaxoSmithKline Consumer Healthcare Attention: Iris H. Shelton, M.S., RAC Associate Director, Regulatory Affairs 1500 Littleton Road, Parsippany NJ 07054-3884

Dear Ms. Shelton:

We have received your Supplemental New Drug Application (sNDA) submitted under section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act (FDCA or the Act) for the following:

**NDA NUMBER:** 21330

**SUPPLEMENT NUMBER:** 14

**PRODUCT NAME:** Nicorette® (nicotine polacrilex) 2 mg and 4 mg Lozenges

**DATE OF SUBMISSION:** September 10, 2012

**DATE OF RECEIPT:** September 10, 2012

This supplemental application, submitted as a "Supplement – Prior Approval," accepted as a "Changes Being Effected in 30 days" provides for adding an analytical testing site.

Unless we notify you within 60 days of the receipt date that the application is not sufficiently complete to permit a substantive review, we will file the application on November 9, 2012 in accordance with 21 CFR 314.101(a). If the application is filed, the user fee goal date will be March 10, 2013.

Please cite the application number listed above at the top of the first page of all submissions to this application. Send all submissions, electronic or paper, including those sent by overnight mail or courier, to the following address:

Food and Drug Administration Center for Drug Evaluation and Research Division of Nonprescription Clinical Evaluation 5901-B Ammendale Road Beltsville, MD 20705-1266

All regulatory documents submitted in paper should be three-hole punched on the left side of the page and bound. The left margin should be at least three-fourths of an inch to assure text is not obscured in the fastened area. Standard paper size (8-1/2 by 11 inches) should be used; however, it may occasionally be necessary to use individual pages larger than standard paper size. Non-standard, large pages should be folded and mounted to allow the page to be opened for review without disassembling the jacket and refolded without damage when the volume is shelved. Shipping unbound documents may result in the loss of portions of the submission or an unnecessary delay in processing which could have an adverse impact on the review of the submission. For additional information, see

 $\underline{http://www.fda.gov/Drugs/DevelopmentApprovalProcess/FormsSubmissionRequirements/DrugMasterFilesDMFs/ucm073080.htm.}$ 

If you have questions, call me, at (301) 796-4013.

Sincerely,

{See appended electronic signature page}

LCDR Luz. E. Rivera, Psy.D.
Regulatory Project Manager
Division of New Drug Quality Assessment III
Office of New Drug Quality Assessment
Center for Drug Evaluation and Research

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/s/
LUZ E RIVERA 09/21/2012