

**CENTER FOR DRUG EVALUATION AND
RESEARCH**

APPLICATION NUMBER:

206289Orig1s000

MICROBIOLOGY / VIROLOGY REVIEW(S)

Product Quality Microbiology Review

2/24/2014

NDA: 206289

Drug Product Name

Proprietary:

Non-proprietary: Atropine Sulfate Ophthalmic Solution USP, 1%

Review Number: 1

Dates of Submission(s) Covered by this Review

Submit	Received	Review Request	Assigned to Reviewer
10/22/2013	10/23/2013	10/23/2013	10/25/2013
1/10/2014	1/10/2014	N/A	N/A
2/14/2014	2/14/2014	N/A	N/A

Submission History (for 2nd Reviews or higher)

None

Applicant/Sponsor

Name: Akorn, Inc.

Address: 1925 West Field Ct., Suite 300, Lake Forest, IL 60045

Representative: Sam Bodapaddi

Telephone: (847) 353-4909

Name of Reviewer: Steven P. Donald, M.S.

Conclusion: Recommended for Approval

Product Quality Microbiology Data Sheet

- A.
1. **TYPE OF SUBMISSION:** Original NDA
 2. **SUBMISSION PROVIDES FOR:** Manufacture and marketing of a sterile drug product
 3. **MANUFACTURING SITE:** Akorn, Inc., 1222 West Grand Avenue, Decatur, IL 62522
 4. **DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY:**
 - Dosage Form: Solution, Drops
 - Route of Administration: Topical, Ocular
 - Strength/Potency: 1%
 - Container: plastic dropper bottle; 2 mL and 5 mL/6 mL and 15 mL/15mL
 5. **METHOD(S) OF STERILIZATION:** [REDACTED] (b) (4)
 6. **PHARMACOLOGICAL CATEGORY:** [REDACTED] (b) (4)
[REDACTED] (b) (4)
- B. **SUPPORTING/RELATED DOCUMENTS:** None
- C. **REMARKS:** An information request was sent to the sponsor on 12/18/2014 and a response was received on 1/10/2014. Another IR was sent to the sponsor on 2/03/2014 and a response was received on 2/14/2014.

filename: N206289r1.doc

Executive Summary

I. Recommendations

- A. Recommendation on Approvability** - Recommended for approval
- B. Recommendations on Phase 4 Commitments and/or Agreements, if Approvable** – N/A

II. Summary of Microbiology Assessments

- A. Brief Description of the Manufacturing Processes that relate to Product Quality Microbiology** – (b) (4)

- B. Brief Description of Microbiology Deficiencies** –
 No product quality microbiology deficiencies were identified based upon the information provided.
- C. Assessment of Risk Due to Microbiology Deficiencies** –
 N/A
- D. Contains Potential Precedent Decision(s)**- Yes No

III. Administrative

- A. Reviewer's Signature** _____
 Steven P. Donald, M.S.
 Microbiology Reviewer
- B. Endorsement Block** _____
 Stephen Langille, Ph.D.
 Senior Microbiology Reviewer
- C. CC Block**
 N/A

22 Page(s) has been Withheld in Full as b4 (CCI/TS) immediately following this page

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/s/

STEVEN P DONALD
02/24/2014

STEPHEN E LANGILLE
02/24/2014

PRODUCT QUALITY MICROBIOLOGY FILING CHECKLIST

NDA Number: 206289

Applicant: Akorn, Inc.

Letter Date: 10/22/2013

Drug Name: Atropine Sulfate
Ophthalmic Solution USP, 1%

NDA Type: 505 (b)(2)

Stamp Date: 10/23/2013

The following are necessary to initiate a review of the NDA application:

	Content Parameter	Yes	No	Comments
1	Is the product quality microbiology information described in the NDA and organized in a manner to allow substantive review to begin? Is it legible, indexed, and/or paginated adequately?	x		CTD Format
2	Has the applicant submitted an overall description of the manufacturing processes and microbiological controls used in the manufacture of the drug product?	x		See P.3.3 for all fill sizes.
3	Has the applicant submitted protocols and results of validation studies concerning microbiological control processes used in the manufacture of the drug product?	x		Yes. See P.3.5 for validation of the largest batch. Additional information provided for sterility assurance, PET, media fill, etc.
4	Are any study reports or published articles in a foreign language? If yes, has the translated version been included in the submission for review?		x	
5	Has the applicant submitted preservative effectiveness studies (if applicable) and container-closure integrity studies?	x		BAC identity and concentrations tests for release and stability. PET testing for stability on selected samples at (b) (4) months and expiry; PET testing performed at the lowest preservative concentration (b) (4). CCI test protocol provided in P.3.5. Results of CCI testing are not found within the submission.
6	Has the applicant submitted microbiological specifications	x		Sections P.3.5 and

	Content Parameter	Yes	No	Comments
	for the drug product and a description of the test methods?			P.5.3
7	Has the applicant submitted the results of analytical method verification studies?	x		Sections P.3.5 and P.5.3
8	Has the applicant submitted all special/critical studies/data requested during pre-submission meetings and/or discussions?			N/A
9	If sterile, are extended post-constitution and/or post-dilution hold times in the draft labeling supported by microbiological data?			N/A. This is a preserved ophthalmic product
10	Is this NDA fileable? If not, then describe why.	x		

Additional Comments:

The results of container closure integrity testing will be requested after the initial review of the application.

Steven Donald, MS

11/12/2013

Reviewing Microbiologist

Date

Stephen Langille, Ph.D.

11/12/2013

Microbiology Secondary Reviewer

Date

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/s/

STEVEN P DONALD
11/15/2013

STEPHEN E LANGILLE
11/15/2013