CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER:

22-221

MICROBIOLOGY REVIEW(S)

Product Quality Microbiology Review

14 April 2008

NDA: 22-221

Drug Product Name
Proprietary: Akten™
Non-proprietary: lidocaine hydrochloride ophthalmic gel.
Drug Product Priority Classification: S

Review Number: 2

Dates of Submission(s) Covered by this Review

Letter	Stamp	Review Request	Assigned to Reviewer
04 MAR 2008	05 MAR 2008	N/A	N/A
11 APR 2008	14 APR 2008	N/A	N/A

Submission History (for amendments only)

Submission Date(s)	Microbiology Review #	Review Date(s)
29 JUN 2007	1	18 JAN 2008

Applicant/Sponsor
Name: Akorn Inc.
Address: 2500 Millbrook Dr.
Buffalo Grove, IL 60089
Representative: Sam Boddapati
Telephone: 847-353-4909

Name of Reviewer: John W. Metcalfe, Ph.D.

Conclusion: Recommend Approval.

Product Quality Microbiology Data Sheet

A. 1. **TYPE OF SUBMISSION:** Amendment to original NDA.

2. **SUBMISSION PROVIDES FOR:** Responses to microbiology deficiencies.

3. **MANUFACTURING SITE:**
Akorn Inc.
72-6 Veronica Ave.
Somerset, NJ 08873

4. **DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY:**
   - Sterile gel in — Bottle; 5 mL fill in 10 mL bottle. b(4)
   - Topical ophthalmic.
   - 3.5%.

5. **METHOD(S) OF STERILIZATION:** —— b(4)

6. **PHARMACOLOGICAL CATEGORY:** Anesthetic.

B. **SUPPORTING/RELATED DOCUMENTS:** Microbiology Review of NDA 22-221 dated 18 January 2008.

REMARKS: None.

File Name: N022221R2.doc

Executive Summary

I. Recommendations

A. Recommendation on Approvability – NDA 22-221 is recommended for approval on the basis of product quality microbiology.

B. Recommendations on Phase 4 Commitments and/or Agreements, if Approvable – Not applicable.

II. Summary of Microbiology Assessments

A. Brief Description of the Manufacturing Processes that relate to Product Quality Microbiology – The bulk drug solution is

b(4)

B. Brief Description of Microbiology Deficiencies – There are no microbiology deficiencies identified.

C. Assessment of Risk Due to Microbiology Deficiencies – Not applicable.

III. Administrative

A. Reviewer's Signature _____
John W. Metcalfe, Ph.D.

B. Endorsement Block _____
Bryan Riley, Ph.D.

CC Block In DFS.

2 Page(s) Withheld

✓ Trade Secret / Confidential (b4)

_____ Draft Labeling (b4)

_____ Draft Labeling (b5)

_____ Deliberative Process (b5)

Withheld Track Number: Microbiology- 1

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/s/

John Metcalfe
4/18/2008 10:55:56 AM
MICROBIOLOGIST

Bryan Riley
4/21/2008 07:56:36 AM
MICROBIOLOGIST
I concur.

Product Quality Microbiology Review

18 January 2008

NDA: 22-221

Drug Product Name
Proprietary: Akten™
Non-proprietary: lidocaine hydrochloride ophthalmic gel.
Drug Product Priority Classification: S

Review Number: 1

Dates of Submission(s) Covered by this Review

Letter	Stamp	Review Request	Assigned to Reviewer
29 JUN 2007	02 JUL 2007	02 JUL 2007	30 JUL 2007

Applicant/Sponsor
Name: Akorn Inc.
Address: 2500 Millbrook Dr.
Buffalo Grove, IL 60089
Representative: Sam Boddapati
Telephone: 847-353-4909

Name of Reviewer: John W. Metcalfe, Ph.D.

Conclusion: Approvable Pending Resolution of the Microbiology Deficiencies.

Product Quality Microbiology Data Sheet

A. 1. **TYPE OF SUBMISSION:** Original NDA.

2. **SUBMISSION PROVIDES FOR:** A new drug product.

3. **MANUFACTURING SITE:**
Akorn Inc.
72-6 Veronica Ave.
Somerset, NJ 08873

4. **DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY:**
- Sterile gel in — Bottle; 5 mL fill in 10 mL bottle. b(4)
- Topical ophthalmic.
- 3.5%.

5. **METHOD(S) OF STERILIZATION:** — b(4)

6. **PHARMACOLOGICAL CATEGORY:** Anesthetic.

B. **SUPPORTING/RELATED DOCUMENTS:** None.

3. **REMARKS:**
An Initial Quality Assessment (dated 27 July 2007) of the subject NDA was performed by the Pharmaceutical Assessment Lead. The IQA did not identify any product quality microbiology issues.

The submission is provided in paper (4 blue jacketed desk copies).

File Name: N022221R1.doc

Executive Summary

I. Recommendations

A. Recommendation on Approvability – NDA 22-221 is approvable pending resolution of the microbiology deficiencies.

B. Recommendations on Phase 4 Commitments and/or Agreements, if Approvable – Not applicable.

II. Summary of Microbiology Assessments

A. Brief Description of the Manufacturing Processes that relate to Product Quality Microbiology – The bulk drug solution is sterilized by

b(4)

3. **Brief Description of Microbiology Deficiencies** – The microbiology deficiencies include a lack of:
   - Identification of ——— residual limits. b(4)
   - Appropriate media fill acceptance criteria.
   - Establishment of a finished product specification for bacterial endotoxins.

C. Assessment of Risk Due to Microbiology Deficiencies – The microbiology deficiencies identified pose a slight risk of injury to patients who use the product.

III. Administrative

A. Reviewer's Signature _____
John W. Metcalfe, Ph.D.

B. Endorsement Block _____
Bryan Riley, Ph.D.

3. **CC Block**
N/A

14 Page(s) Withheld

✓ Trade Secret / Confidential (b4)

_____ Draft Labeling (b4)

_____ Draft Labeling (b5)

_____ Deliberative Process (b5)

Withheld Track Number: Microbiology- 2

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/s/

John Metcalfe
1/23/2008 11:19:52 AM
MICROBIOLOGIST

Bryan Riley
1/23/2008 01:27:39 PM
MICROBIOLOGIST
I concur.