

**CENTER FOR DRUG EVALUATION AND  
RESEARCH**

*APPLICATION NUMBER:*

**203565Orig1s000**

**MICROBIOLOGY REVIEW(S)**

# Product Quality Microbiology Review

4/24/2013

**NDA:** 203565

**Drug Product Name**

**Proprietary:** Injectafer

**Non-proprietary:** Iron Carboxymaltose

**Review Number:** 2

**Dates of Submission(s) Covered by this Review**

<b>Submit</b>	<b>Received</b>	<b>Review Request</b>	<b>Assigned to Reviewer</b>
1/30/2013	1/30/2013	2/28/2013	3/08/2013

**Submission History (for 2<sup>nd</sup> Reviews or higher)**

<b>Submit Date(s)</b>	<b>Microbiology Review #</b>	<b>Review Date(s)</b>
9/30/2011	1	5/08/2013
3/26/2013	1	5/08/2013

**Applicant/Sponsor**

**Name:** Luitpold Pharmaceuticals Inc.

**Address:** P.O. Box 9001, One Luitpold Dr., Shirley, NY 11967

**Representative:** Marsh Simon

**Telephone:** 610 650 4200

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

**Conclusion:** Recommended for Approval

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## Product Quality Microbiology Data Sheet

- A.**
- 1. TYPE OF SUBMISSION:** Resubmission
  - 2. SUBMISSION PROVIDES FOR:** Amendment and complete response submission to complete response dated 7/23/2012
  - 3. MANUFACTURING SITE:** [REDACTED] (b) (4)  
[REDACTED]
  - 4. DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY:** Injection, IV, 50 mg Iron/ml in glass vials
  - 5. METHOD(S) OF STERILIZATION:** [REDACTED] (b) (4)
  - 6. PHARMACOLOGICAL CATEGORY:** Treatment for iron deficiency
- B. SUPPORTING/RELATED DOCUMENTS:** N203565r1.doc, dated 5/08/2012; DMF [REDACTED] (b) (4) and DMF review [REDACTED] (b) (4)\_Dec5\_A1.doc, dated 4/24/2013.
- C. REMARKS:** An alternate manufacturing site, [REDACTED] (b) (4) is proposed. The applicant's letter of December 5, 2012 indicates a manufacturing site change. Section 3.2.P.3 in the subject submission lists only the [REDACTED] (b) (4) location as the manufacturing site for the subject drug product, but at the top of the page it states: "In addition to those facilities previously identified within this NDA, the following facilities may be used for the indicated services associated with the manufacture of Injectafer at the alternate [REDACTED] (b) (4) manufacturing facility". The subject submission provides only data for the 15 ml vial containing 750 mg iron. References to the [REDACTED] (b) (4) vial are stated to have been removed from the batch records and other configurations of the drug product are not mentioned. It appears that at this time, this alternate facility will manufacture only the 750 mg configuration and manufacturing at the previously reviewed facility will remain unchanged. The Product Quality Microbiology review, dated 5/08/2012, which covered manufacturing at the [REDACTED] (b) (4) facility, recommended the submission for approval. After the initial review of the 1/30/2013 submission, an information request was sent to the sponsor on 4/2/2013. A response dated 4/12/2013 was provided for review and is included herein.

**filename:** N203565r2.doc

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**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** – Injectafer will be (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

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/s/  
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STEVEN P DONALD  
04/30/2013

STEPHEN E LANGILLE  
04/30/2013

# Product Quality Microbiology Review

8 May 2012

**NDA:** 203-565/N-000

**Drug Product Name**

**Proprietary:** Injectafer<sup>®</sup>

**Non-proprietary:** Ferric Carboxymaltose

**Review Number:** 1

**Dates of Submission(s) Covered by this Review**

Submit	Received	Review Request	Assigned to Reviewer
30 September 2011	3 October 2011	17 October 2011	20 October 2011
26 March 2012	26 March 2012	N/A	N/A

**Submission History (for amendments only):** N/A

**Applicant/Sponsor**

**Name:** Luitpold Pharmaceuticals Inc.

**Address:** P.O. Box 9001  
One Luitpold Dr.  
Shirley, NY 11967

**Representative:** Marsha E. Simon

**Telephone:** 610-650-4200

**Name of Reviewer:** Stephen E. Langille, Ph.D.

**Conclusion:** Recommended for approval

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## Product Quality Microbiology Data Sheet

- A. 1. **TYPE OF SUBMISSION:** Original NDA
2. **SUBMISSION PROVIDES FOR:** [REDACTED] <sup>(b) (4)</sup> of an aqueous intravenous injection.
3. **MANUFACTURING SITE:** Luitpold Pharmaceuticals Inc.
4. **DOSAGE FORM, ROUTE OF ADMINISTRATION AND STRENGTH/POTENCY:**
- Sterile liquid
  - 50 mg iron/mL in glass vials
  - Intravenous injection
5. **METHOD(S) OF STERILIZATION:** [REDACTED] <sup>(b) (4)</sup>
6. **PHARMACOLOGICAL CATEGORY:** Treatment of iron deficiency
- B. **SUPPORTING/RELATED DOCUMENTS:** Not applicable
- C. **REMARKS:** The application was submitted in eCTD format. An information request was conveyed to the applicant via e-mail on 19 March 2012. The applicant responded on 26 March 2012.

**filename:** N203565r1.doc

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## **Executive Summary**

### **I. Recommendations**

#### **A. Recommendation on Approvability**

NDA 203-565 is recommended for approval from the standpoint 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 -**

Injectafer will be (b) (4)

#### **B. Brief Description of Microbiology Deficiencies -**

Ne deficiencies were identified based upon the information provided.

#### **C. Assessment of Risk Due to Microbiology Deficiencies -**

Not applicable

### **III. Administrative**

**A. Reviewer's Signature** \_\_\_\_\_  
Stephen E. Langille, Ph.D.

#### **B. Endorsement Block**

John Metcalfe, Ph.D., Senior Microbiology Reviewer

#### **C. CC Block**

N/A

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/s/  
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STEPHEN E LANGILLE  
05/08/2012

JOHN W METCALFE  
05/08/2012  
I concur.

# PRODUCT QUALITY MICROBIOLOGY FILING CHECKLIST

**NDA Number:** 203-565      **Applicant:** Luitpold Inc.      **Letter Date:** 30 September 2011  
**Drug Name:** Injectafer®      **NDA Type:** Standard      **Stamp Date:** 3 October 2011

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

	<b>Content Parameter</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
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		
2	Has the applicant submitted an overall description of the manufacturing processes and microbiological controls used in the manufacture of the drug product?	X		
3	Has the applicant submitted protocols and results of validation studies concerning microbiological control processes used in the manufacture of the drug product?	X		
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		The drug product is not preserved. Integrity testing is covered in section 3.2.P.2.5
6	Has the applicant submitted microbiological specifications for the drug product and a description of the test methods?	X		
7	Has the applicant submitted the results of analytical method verification studies?	X		
8	Has the applicant submitted all special/critical studies/data requested during pre-submission meetings and/or discussions?		X	No such studies were requested from the New Drug Microbiology Staff
9	Is this NDA fileable? If not, then describe why.	X		

Additional Comments: The application was submitted in eCTD format. The drug product is

(b) (4)

Reviewing Microbiologist  
Stephen E. Langille, Ph.D.

Date

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Microbiology Secondary Reviewer/Team Leader  
John Metcalfe, Ph.D. Senior Microbiology Reviewer

Date

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/s/  
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STEPHEN E LANGILLE  
12/01/2011

JOHN W METCALFE  
12/01/2011  
I concur.