Application Type	BLA
STN	125563/0.38
CBER Received Date	August 21, 2018
PDUFA Goal Date	December 29, 2018
Division / Office	DVRPA/OVRR
Committee Chair	Rana Chattopadhyay
Project Manager	Kelsy Hoffman
Priority Review	No
Reviewer Name(s)	Ye Yang Mathematical Statistician, VEB, DB, OBE
Review Completion Date / Stamped Date	
Supervisory Concurrence	Tsai-Lien Lin Branch Chief, VEB, DB, OBE
Applicant	MCM Vaccine Company
Established Name	Diphtheria and Tetanus Toxoids and Acellular Pertussis Vaccine Adsorbed, Inactivated Poliovirus, Haemophilus b Conjugate [Meningococcal Protein Conjugate] and Hepatitis B [Recombinant] Vaccine
Pharmacologic Class	Vaccine
Purpose of Supplement	To provide responses to CBER information requests and to provide information on the D-Antigen (b) (4) Calculation Program for Polio.

Table of Contents

1. Executive Summary 3
2. Regulatory Background 3
3. Sources of Data and Other Information Considered 3

3.1 Review Strategy 3
3.2 Documents That Serve as Basis for the Statistical Review 3

4. D-Antigen (b) (4) Analysis for Polio 4

4.1 Background 4
4.2 Estimates of Model Parameters 4
4.3 Assessment of (b) (4) 5
4.4 Validity of the Test 6
4.5 Pooled Dataset 6

5. **Conclusions 7**

1. EXECUTIVE SUMMARY

MCM Vaccine Company submitted responses to information requests dated June 14, July 16, July 17, and July 23, 2018 on August 21, 2018 (STN 125563/0.38), which included documents pertaining to the D-antigen (b) (4) Calculation Program for the poliomyelitis component of Vaxelis. A statistics review was requested by the product review team on September 21, 2018 to review the (b) (4) calculation algorithm for the D-antigen (b) (4) assay provided by the applicant. This memo focuses on the calculation methods used in the D Antigen (b) (4) Calculation Program for Polio.

Based on the algorithm provided, the (b) (4) analysis for the D-antigen (b) (4) assay appears to be appropriate. There are no further comments.

2. REGULATORY BACKGROUND

Vaxelis (formerly (b) (4) is a hexavalent diphtheria, tetanus, pertussis, poliomyelitis, hepatitis B, and Haemophilus type b vaccine being developed by MCM Vaccine Company. Responses to information requests dated June 14, July 16, July 17, and July 23, 2018 and documents pertaining to the D-antigen (b) (4) Calculation Program for the poliomyelitis component of Vaxelis were submitted by MCM Vaccine Company on August 21, 2018 (STN 125563/0.38).

3. SOURCES OF DATA AND OTHER INFORMATION CONSIDERED

3.1 Review Strategy

This memo focuses on the algorithm and implementation of the D Antigen (b) (4) Calculation Program for Polio.

3.2 Documents that Serve as Basis for the Statistical Review

1. SOP Q_0268418, "Design Specification for D-antigen (b) (4) Calculation Program for Polio."
2. Response to June 14, 2018 information request.
3. Response to October 15, 2018 information request (STN 125563/0.44)
4. Response to October 24, 2018 information request (STN 125563/0.45)
5. Response to November 27, 2018 information request (STN 125563/0.54)

4. D-ANTIGEN (b) (4) ANALYSIS FOR POLIO

(b) (4)

[redacted]

2 Pages Determined to be Not-Releasable: (b)(4)

[redacted]

(b) (4)

[redacted]

5. CONCLUSIONS

Based on the algorithm provided, the (b) (4) analysis for the D-antigen (b) (4) assay appears to be appropriate. There are no further comments.