1. SUMMARY INFORMATION ON THE FINAL BATCH OF FINISHED PRODUCT

Trade name:	Pestorin Mormyx inj. sicc . ad us. vet
Ph.Eur.	*Vaccina ad usum veterinarium*
Nature of product:	Vaccine against rabbit haemorhagic disease and myxomatosis
Target species:	Domestic rabbit
Marketing authorisation number:	2043/1/06 AOGYTI (1 adag)
Batch number(s) of finished product:	**81 53 21**
Type of final product:	Lyophilisate and solvent for solution for injection
Type of final container:	Liquid component: 3 mL glass bottles with rubber stoppers and aluminium caps. Freeze-dried component: 3 mL glass bottles with rubber stoppers and aluminium caps.
Total number of containers in this batch:	11 600 x 1 dose
Number of containers the release is applied for:	1 400 x 5 x 1 mL
Number of doses per container:	1 dose
Number of samples for the competent authority:	----
Date of start of period of validity (start of titration/potency test):	4.4.2014
Date of expiry:	29.1.2016
Shelf life:	24 months
Storage temperature:	Keep in a dry and dark place at of 2 to 8 °C. Do not freeze!
Name and address of applicant:	ALPHA - VET Animal Health Ltd. Homoksor 7 8000 Székesfehérvár Hungary
Name and address of Marketing Authorisation holder if different:	**Bioveta, a. s.** Komenského 212 683 23 Ivanovice na Hané, Czech Republic
Name and address of the batch control site:	**Bioveta, a. s.** Komenského 212 683 23 Ivanovice na Hané, Czech Republic

2. PRODUCTION INFORMATION

Summary information scheme on batch specific production data including dates of different production stages, production sites and identification numbers.

Product name:	**PESTORIN MORMYX – RHDV component**	Component batch number:	**37 51 21 C**
Component ID No.	**Site(s) of manufacture**	**Date of manufacture**	
Antigen RHDV *Raw virus no. 26 05 2013*	Bioveta, a. s.	10.5.2013	
Aluminium oxide 2% *Batch no. 12-810-30* *Protocol no. M2013-03707*	BK GIULINI	-	
Thiomersal 2% *Batch no. 000 638* *Protocol no. M2013-03394*	GIHON	-	
Buffered saline solution *Batch no. 54 51 21*	Bioveta, a. s.	16.1.2014	
Water for injection *Batch no. 29 01 2014*	Bioveta, a. s.	29.1.2014	

Product name:	**PESTORIN MORMYX – MXT component**	Component batch number:	**62 52 21 A**
Component ID No.	**Site(s) of manufacture**	**Date of manufacture**	
Antigen MXT 89/2013/MXT	Bioveta, a. s.	4.3.2013	
Lyophilisation medium Batch no. 72 62 20 Batch no. 75 52 21	Bioveta, a.s.	16.12.2013 7.2.2014	

2.1 STARTING MATERIALS

2.1.1 RHDV component

2.1.1.1 Virus seed lots

Master seed material	Designation	Last testing
MSV Bio 20: RHDV	6th passage from 1.5.1995	21.12.2007

Working seed material	Designation	Last testing
WSV Bio 20: RHDV	7th passage from 25.3.2011	12.5.2011

2.1.1.2 Rabbits for production

Supplier:	Svoboda

2.1.2 MXT component

2.1.2.1 Virus seed lots

Master seed material	Designation	Last testing
MSV Bio18: MXT	57th passage from 2.9.1995	15.11.2010

Working seed material	Designation	Last testing
WSV Bio18: MXT	59th passage from 29.9.2012	9.10.2012

2.1.2.2 Permanent cell line

Master cell seed	Designation	Last testing
MCS-Bio 103: RK-13	4th passage from 5.6.1995	19.2.2010

Working cell seed	Designation	Last testing
WCS-Bio 103: RK-13	9th passage from 6.8.2001	24.2.2010

2.1.2.3 Other materials of animal origin

Material	Supplier	Lot number
Foetal bovine serum	PAA Laboratories	A11209-1363, A10312 - 0574
Trypsin	Difco	89 62 19, 91 52 20

2.2 INTERMEDIATE STAGES OF PRODUCTION

2.2.1 RHDV component – raw virus production

ID-no. of raw virus RHDV:

Production step	Start	End	Material	Volume	Other relevant data
Infection of rabbit	11.3.2013	11.3.2013	rabbit	221 pcs	-
Organs taking	13.3.2013	15.3.2013	liver	15 700 g	-
Freeze of organs	13.3.2013	15.3.2013	liver	15 700 g	-
Thawing of organs and preparation of organs suspension	5.5.2013	6.5.2013	liver	15 700 g	-
Centrifugation	6.5.2013	6.5.2013	suspension	42 000 mL	-
Inactivation	6.5.2013	7.5.2013	Betapropiolactone	42 mL	-
Centrifugation	10.5.2013	10.5.2013	supernatant	30 000 mL	-
pH adjustment	-	-	-	-	-

2.2.2 MXT component – Antigens production

Antigen harvest MXT 89/2013/MXT

Production step	Start	End	Material	Volume	Other relevant data
Multiplication of cell line	11.2.2013	28.2.2013	trypsin solution culture medium	- -	- -
Infection	28.3.2013	4.3.2013	-	200 mL	-
Incubation	4.3.2013	4.3.2014	-	c. 40 L	-
Collection and homogenisation of viral medium	4.3.2014	4.3.2013	-	38 L	-
Freeze of viral medium	4.3.2013	4.3.2013	-	38 L	-

2.3 CREATION OF THE FINAL PRODUCT

2.3.1 Blending and vaccine composition

2.3.1.1 Blending and vaccine composition

2.3.1.1.1 RHDV component

ID-no. of vaccine bulk: **37 51 21 C**

Blending of vaccine bulk Date: 29. – 30.1.2013 Start-End: 13:00 – 13:30, 5:30 – 6:00

Components	Start	End	Batch No.	Total volume
RHDV raw virus	30.1.2014 5:10	30.1.2014 5:15	26 05 2013	6 L
Aluminium oxide 2%	30.1.2014 5:15	30.1.2014 5:25	12-810-30	46 L
Thiomersal 2%	30.1.2014 5:25	30.1.2014 5:30	000 638	1.15 L
Buffered saline solution	30.1.2014 5:00	30.1.2014 5:10	54 51 21	17.25 L
Water for injection	29.1.2014 13:00	29.1.2014 13:30	29 01 2014	159.6 L
HCl	-	-	-	-
Total				**230 L**

Vaccine composition

Component	Batch no.	Total volume	Final concentration
RHDV raw virus	26 05 2013	6 L	2.5 %
Aluminium oxide 2 %	12-810-30	46 L	20 %
Thiomersal 2 %	000 638	1.15 L	0.5 %
Buffered saline solution	54 51 21	17.25 L	7.5 %
Water for injection	29 01 2014	159.6 L	69.5 %
HCl	-	-	-

2.3.1.1.2 MXT component

ID-no. of vaccine bulk: **62 52 21**

Blending of vaccine bulk

Date: 24.2.2014 Start – End: 9:45 – 10:10

Components	Start	End	Batch number	Total volume
Antigen harvest MXT	24.2.2014	24.2.2014	89/2013/MXT	3.85 L
Maitenance medium	24.2.2014	24.2.2014	26 61 20 68 61 20	7.7 L
Lyophilisation medium	24.2.2014	24.2.2014	72 62 20 75 52 21	2.25 L 1.2 L
Total		-		**15 L**

Vaccine composition

Component	Batch number	Total volume	Final concentration
MXT antigen	89/2013/MXT	3.85 L	38,5 %
Maitenance medium	26 61 20 68 61 20	7.7 L	38,5 %
Lyophilisation medium	72 62 20 75 52 21	2.25 L 1.2 L	23 %

2.3.2 Filling:

2.3.2.1 RHDV component

Component batch number	Filling date	Filled container (pcs)	Volume filled (mL)
37 51 21C	25.3.2014	23 689 pcs	1.2 mL

2.3.2.2 MXT component

Component batch number	Filling date	Filled container (pcs)	Volume filled (mL)
62 52 21 A	24.2.2014	11 841 pcs	1.0 mL

2.3.3 Lyophilisation (MXT component)

Final batch number	Start	End	Number of containers (pcs)
62 52 21 A	26.2.2014	28.2.2014	11 839 pcs

2.4 IN PROCESS CONTROLS

2.4.1 RHDV component 37 51 21

2.4.1.1 In process control – viral antigen (raw virus)

Test (Method)	Start	End	Result	Threshold	Conclusion
Titre of virus (SOP D 61)	10.5.2013	10.5.2013	32 768 HAU/mL	Min. 4096 HAU/mL	*conforms*
Sterility (SOP D 16)	10.5.2013	24.5.2013	Sterile	Must be sterile	*conforms*
pH (SOP D 47)	10.5.2013	10.5.2013	7.05	6.5 - 7.5	*conforms*
Control of virus inactivation (SOP D 66)	10.5.2013	17.5.2013	Approved	Suspension of virus must be inactivated	*conforms*

2.4.1.2 In process control – vaccine formulation (vaccine bulk)

Test (Method)	Start	End	Result	Threshold	Conclusion
Sterility (SOP D 16)	30.1.2014	20.2.2014	Sterile	Must be sterile	*conforms*
pH (SOP D 47)	30.1.2014	30.1.2014	7.07	6.5 - 7.5	*conforms*
Content of aluminium oxid (SOP D 40)	30.1.2014	30.1.2014	0.37%	0.2 - 0.6 %	*conforms*
Thiomersal content (SOP D 30)	30.1.2014	30.1.2014	0.100mg/mL	0.085 - 0.115 mg/mL	*conforms*

2.4.2 MXT component 60 52 21

2.4.2.1 In process control – Antigen MXT

Antigen MXT 89/2013/MXT

Test (Method)	Start	End	Result	Threshold	Conclusion
MXTV titre (SOP D 65)	6.3.2013	11.3.2013	$10^{5.8}$ $TCID_{50}$/mL	min. $10^{4.5}$ $TCID_{50}$/mL	***conforms***
Sterility test (SOP D 16)	4.3.2013	18.3.2013	sterile	Must be sterile	***conforms***

2.4.2.2 In process control – Lyophilisation medium

Lyophilisation medium 72 62 20

(if several batches are used and mixed together before blending with antigen following table is to repeated for every batch)

Test (Method)	Start	End	Result	Threshold	Conclusion
Sterility test (SOP D 16)	16.12.2013	30.12.2013	sterile	Must be sterile	***conforms***

Lyophilisation medium 75 52 21

(if several batches are used and mixed together before blending with antigen following table is to repeated for every batch)

Test (Method)	Start	End	Result	Threshold	Conclusion
Sterility test (SOP D 16)	7.2.2014	21.2.2014	sterile	Must be sterile	***conforms***

2.4.2.3 In process control – Vaccine formulation (vaccine bulk before lyophilisation)

Bulk – date of production 62 51 21

Test (Method)	Start	End	Result	Threshold	Conclusion
MXTV titre (SOP D 65)	24.2.2014	1.3.2014	$10^{5.1}$ $TCID_{50}$/mL	min. $10^{3.5}$ $TCID_{50}$/mL	***conforms***
Sterility test (SOP D 16)	24.2.2014	10.3.2014	Sterile	Must be sterile	***conforms***
pH (SOP D 47)	24.2.2014	24.2.2014	6.5.	6.3 – 6.5	***conforms***

3. FINAL PRODUCT TESTING

Test (Method)	Start	End	Result	Threshold	Conclusion
Liquid component (RHDV) 37 51 21 C					
Appearance (SOP D 192)	8.4.2014	8.4.2014	White or greyish white liquid containing fine sediment	White or greyish white liquid containing fine sediment	**Satisfy**
Original package content (SOP D 70)	8.4.2014	8.4.2014	1.05 mL	Min 20 / 10 / 5 / 1 mL	**Satisfy**
Sterility test (SOP D 16)	28.3.2014	18.4.2014	Liquid component is sterile	Liquid component shall be sterile	**Satisfy**
Identity (SOP D 237)	4.4.2014	25.4.2014	1 : 80	The presence of the specific antibodies against RHDV having the titre of at least 80 shall be proved in the serum of the vaccinated animals.	**Satisfy**
Content of aluminium oxid (SOP D 40)	8.4.2014	8.4.2014	0.3951 %	0.2 – 0.6 %	**Satisfy**
Thiomersal content (SOP D 30)	8.4.2014	8.4.2014	0.097 mg/mL	0.085 – 0.115 mg/mL	**Satisfy**
pH (SOP D 47)	8.4.2014	8.4.2014	7.16	6.5 – 7.5	**Satisfy**
Airtightness (SOP D 39)	8.4.2014	8.4.2014	The vials are hermetically sealed	The vials shall be hermetically sealed.	**Satisfy**

Test (Method)	Start	End	Result	Threshold	Conclusion
Lyophilized component (MXT) 62 51 21 A					
Appearance (SOP D 192)	8.4.2014	8.4.2014	Lyophilizate is yellowish colour and spongy structure	Lyophilizate is yellowish colour and with spongy structure.	**Satisfy**
Sterility (SOP D 16)	28.3.2014	18.4.2014	The lyophilized component is sterile	Vaccine must be sterile.	**Satisfy**
Mycoplasma (SOP D 50)	28.3.2014	2.5.2014	The vaccine complies with the test for mycoplasmas	Free from mycoplasma	**Satisfy**
Extraneous agents (SOP D 203)	28.3.2014	25.4.2014	Absence of antibodies against the virus of the viral haemorrhagic disease in rabbits	The testing results conform if absence of antibodies against the virus of the viral haemorrhagic disease in rabbits is proved during the serological examination.	**Satisfy**
Identity (SOP D 64)	26.3.2014	28.3.204	Specific fluorescence was proved	The positive control shall exhibit the apparent positive reaction, the negative control shall exhibit absence of the specific fluorescence.	**Satisfy**
Virus titre (SOP D 65)	28.3.204	2.4.2014	$10^{5.0}$ $TCID_{50}$/1mL	MXT virus attenuated strain CAMP V-219: vaccine titre $10^{3.3}$ $TCID_{50}$/1 mL - $10^{5.8}$ $TCID_{50}$/1 mL	**Satisfy**
Residual humidity (SOP D 38)	8.4.2014	8.4.2014	1.02 %	Max. 3 %	**Satisfy**
Vacuum (SOP D 37)	8.4.2014	8.4.2014	Complies	The vials shall be evacuated to the residual pressure lower than 2.66 Pa	**Satisfy**

Test (Method)	Start	End	Result	Threshold	Conclusion
Diluted vaccine 81 53 21					
Appearance (SOP D 192)	8.4.2014	8.4.2014	Reconstituted vaccine is greyish white liquid containing fine sediment	Reconstituted vaccine is white or greyish white liquid, slightly pinkish containing fine sediment	**Satisfy**
Sterility (SOP D 16)	28.3.2014	18.4.2014	The vaccine is sterile	The vaccine shall be sterile	**Satisfy**
pH (SOP D 47)	8.4.2014	8.4.2014	7.23	6.5 – 7.5	**Satisfy**
Residual live virus (SOP D 60)	31.3.204	14.4.2014	No abnormal local or total responses were observed in the vaccinated animals	The vaccine complies with the test if no rabbit shows notable signs of disease or dies from causes attributable to the vaccine.	**Satisfy**
Efficacy			-	*Efficacy testing against rabbit haemorrhagic*	
(SOP D 59)	4.4.2014	25.4.2014	Not fewer than 90% of vaccinated rabbits show no signs of RHDV	*a) Challenge testing:* The vaccine meets the requirements specified for the efficacy testing if at least 90% of the vaccinated animals survive during the specified monitoring period.	
(SOP D 205)	4.4.2014	25.4.2014	1 : 113,14	b*) Determination of the titre of antibodies against the virus of haemorrhagic disease in rabbits using the haemagglutination-inhibition test:* The vaccine meets the requirements specified for efficacy testing if the average titre of HI antibodies of at least 1:80 is found out in the vaccinated rabbits.	**Satisfy**
			-	*Efficacy testing against myxomatosis*	
(SOP D 67)	21.2.2014	14.3.2014	Results in batch no. 37 51 21 C (see supplement)	*Challenge testing:* The result of the test is acceptable if during the 21-day monitoring period at least 90 % of vaccinates resist to the infection by myxoma virus.	

4. CERTIFICATION BY THE MANUFACTURER

Certification by qualified person taking the overall responsibility for production and control of the product:

I herewith certify that **PESTORIN MORMYX inj. sicc. ad us. vet.** batch N° **81 53 21** was manufactured and tested according to the procedures approved by the competent authorities and complies with the quality requirement and that all measures have been taken to demonstrate compliance with Directive 2001/82/EC as amended by Directive 2004/28/EC.

NAME: Mgr. Hana Nezvalová

FUNCTION: Head of QC, QP

DATE: 12.5.2014

SIGNATURE: .....