

Manufacturer's Batch Protocol

Product: Bovipast RSP Vakcina A.U.V.

Batch:A083A01

MEMBER STATE SPECIFIC INFORMATION

Member state: **HUNGARY**

Antigen containing component:

Trade name: **Bovipast RSP Vakcina A.U.V.**

Marketing authorisation number:

Target species: **Cattle**

Total number of containers in
this batch: **18 535**

Number of containers the release
is applied for: **18 535**

Number of doses per container: **10**

Number of samples for the
competent authority: **-**

Date of expiry: **Jan-2015**

Name and address of Marketing

Authorisation Holder: **Intervet International B.V.
Wim de Körverstraat 35
5831 AN Boxmeer
THE NETHERLANDS,
represented by the local
company**

09-Dec-2013/ce

1102990720/10

Manufacturer's Batch Protocol

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Batch: *A083A01*

SUMMARY INFORMATION ON THE FINAL BATCH OF FINISHED PRODUCT

Common name of product:	Bovine respiratory syncytial virus, Para-influenza virus and Mannheimia haemolytica vaccine (inactivated) for cattle.
Batch number of finished product:	A083A01
Batch number of final bulk:	A083
Pharmaceutical form of finished product:	Suspension for injection
Type of final container:	Hydrolytical class type I glass
Date of start of period of validity:	19-Jul-2013
Storage temperature:	2-8 °C
Name and address of manufacturer:	Intervet International B.V. Wim de Körverstraat 35 5831 AN BOXMEER NEDERLAND
Name and address of the batch release site:	Intervet International B.V. Wim de Körverstraat 35 5831 AN BOXMEER NEDERLAND

CERTIFICATION BY THE MANUFACTURER

I herewith certify that concerned batch 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.

Name:
Function:
Date:
Signature:

P.G. Mooren
Qualified Person
24 DEC 2013


Manufacturer's Batch Protocol

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Batch: *A083A01*

FINAL BATCH TESTING (FINISHED PRODUCT)

<u>Date on</u>	<u>Date off</u>	<u>Test results</u>
10-Jul-2013	31-Jul-2013	<u>Sterility (1.8)</u> Tested according to Ph. Eur. 0062/Ph.Eur.2.6.1 Result: No growth Threshold: No growth Conclusion: Passed
26-Jul-2013	16-Aug-2013	<u>Inactivation BRSV</u> Result: Inactivated Threshold: Inactivated Conclusion: Passed
26-Jul-2013	16-Aug-2013	<u>Inactivation PI3</u> Result: Inactivated Threshold: Inactivated Conclusion: Passed
03-Oct-2013	24-Oct-2013	<u>Inactivation M. haemolytica</u> Result: Inactivated Threshold: Inactivated Conclusion: Passed
19-Jul-2013	19-Aug-2013	<u>Potency using rabbits (1.6)</u> Result: Conform Threshold: Conform Conclusion: Passed
		<u>BRSV antibody</u> Single result: 128 / 24 / 21 / 71 / 25 / 71 / 42 / 27 / 29 / 21 Average: 46 Result standard: 8 Threshold: Antibody level not sign. lower than std. Conclusion: Passed
		<u>Identity BRSV</u> Result: Identity conform Threshold: Identity conform Conclusion: Passed

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FINAL BATCH TESTING (FINISHED PRODUCT)

<u>Date on</u>	<u>Date off</u>	<u>Test results</u>
		<u>PI3 antibody</u>
		Single result: 40 / 100 / 40 / 1 / 90 / 80 / 160 / 50 / 200 / 160 Average: 92 Result standard: 37 Threshold: Antibody level not sign. lower than std. Conclusion: Passed
		<u>Identity PI3</u>
		Result: Identity conform Threshold: Identity conform Conclusion: Passed
		<u>M. haemolytica antibody</u>
		Single result: 63.50 / 64.09 / 56.31 / 56.06 / 55.34 / 51.79 / 56.43 / 43.75 / 60.51 / 61.75 % Average: 57 % Threshold: AB levels not sign. lower than passmark(37.1%) Conclusion: Passed
		<u>M. haemolytica quantification (1.9)</u>
		Single result: 0.233 / 0.227 / 0.426 / 0.270 / 0.386 / 0.292 Average: 0.306 1:5 diluted standard single result: 0.098 Average 1:5 diluted standard: 0.098 Threshold: O.D. significantly > 1:5 diluted std. Conclusion: Passed
		<u>Aluminium (1.1)</u>
12-Sep-2013	12-Sep-2013	Tested according to Ph. Eur. 2.5.13 Result: 3 mg/mL Threshold: 2 – 3 mg/mL Conclusion: Passed
		<u>Formaldehyde (1.2)</u>
23-Sep-2013	23-Sep-2013	Result: 0.15 mg/mL Threshold: <= 0.50 mg/mL Conclusion: Passed

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FINAL BATCH TESTING (FINISHED PRODUCT)

<u>Date on</u>	<u>Date off</u>	<u>Test results</u>
01-Aug-2013	01-Aug-2013	<u>Sodium timerfonate (1.3)</u> Result: 0.0096 mg/mL Threshold: 0.0085 – 0.0115 mg/mL Conclusion: Passed
26-Jul-2013	26-Jul-2013	<u>pH (1.4)</u> Tested according to Ph. Eur. 2.2.3 Result: 7.8 Threshold: 6.9 – 7.9 Conclusion: Passed
23-Jul-2013	23-Jul-2013	<u>Endotoxin (1.7)</u> Result: 1.1 10 ⁵ IU/dose Threshold: <= 2.5 x 10 ⁵ IU/dose Conclusion: Passed

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PRODUCTION INFORMATION

<u>Component</u>	<u>Batch</u>	<u>Site(s) of manufacturing</u>
Antigen BRSV	See composition table	Intervet, Salamanca, Spain
Antigen PI3	See composition table	Intervet, Salamanca, Spain
Antigen M. haemolytica	See composition table	Intervet, Milton Keynes, UK
Bulk vaccin	see blending	Intervet, Boxmeer, the Netherlands
Filled product	see filling	Intervet, Boxmeer, the Netherlands

STARTING MATERIALS:

Virus seed lots:

Master seed material: **BRSV**
MS-batch number: **Lot no. 2, 19.06.1995**
Date of last testing: **27-JUN-1995**

Working seed material: **BRSV**
WS-batch number: **30H10**
Date of last testing: **31-Jan-2011**

Master seed material: **PI3**
MS-batch number: **Lot no. 2, 13.06.1995**
Date of last testing: **27-JUN-1995**

Working seed material: **PI3**
WS-batch number: **12E10**
Date of last testing: **24-Jan-2011**

Bacterial seed lots:

Master seed material: **M. haemolytica**
MS-batch number: **Lot no. S1131/95M, 12-01-1996**
Date of last testing: **26-JAN-1996**

Working seed material: **M. haemolytica**
WS-batch number: **08/10/04/W**
Date of last testing: **03-Feb-2005**

Permanent cell line:

Master cell seed: **MDBK cell line**
MCS-batch number: **6th pas. BW, 25-04-1994**
Date of last testing: **18-JAN-1996**

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INTERMEDIATE STAGES OF PRODUCTION

PRODUCTION OF BRSV COMPONENT:

<u>Production step</u>	<u>Start</u>	<u>End</u>	<u>Volume</u>
Batch SBRS13001			
Seed:	28-Jan-2013	28-Jan-2013	1984.00 m ^l
Harvest:	05-Feb-2013	05-Feb-2013	782.50 kg
Inactivation:	05-Feb-2013	09-Feb-2013	789.80 kg
Batch SBRS13002			
Seed:	04-Feb-2013	04-Feb-2013	2400 m ^l
Harvest:	12-Feb-2013	12-Feb-2013	771.00 kg
Inactivation:	12-Feb-2013	16-Feb-2013	778.20 kg

PRODUCTION OF PI3 COMPONENT:

<u>Production step</u>	<u>Start</u>	<u>End</u>	<u>Volume</u>
Batch SPI313001			
Seed:	08-Jan-2013	08-Jan-2013	3139.50 m ^l
Harvest:	14-Jan-2013	14-Jan-2013	913.80 kg
Inactivation:	14-Jan-2013	15-Jan-2013	922.30 kg

PRODUCTION OF M. HAEMOLYTICA COMPONENT:

<u>Production step</u>	<u>Start</u>	<u>End</u>	<u>Volume</u>
Batch LMHB002202			
Seed:	22-Oct-2012	22-Oct-2012	150 m ^l
Harvest:	22-Oct-2012	22-Oct-2012	3000 m ^l
Inactivation:	22-Oct-2012	23-Oct-2012	3000 m ^l
Batch LMHB002301			
Seed:	21-Feb-2013	21-Feb-2013	150 m ^l
Harvest:	21-Feb-2013	21-Feb-2013	3000 m ^l
Inactivation:	21-Feb-2013	22-Feb-2013	3000 m ^l

CREATION OF THE FINISHED PRODUCT

BLENDING OF FINAL BULK:

Batch number: **D012**
Start date: **13-Jun-2013**
End date: **13-Jun-2013**
Total volume: **3000.00 kg**

Manufacturer's Batch Protocol

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Batch:A083A01

COMPOSITION OF THE FINAL BULK

Components	Batch no.	Total units
BRSV	SBRS13001, SBRS13002	750.30 kg
Pi3	SPI313001	600.20 kg
M. haemolytica	LMHB002202, LMHB002301	35.06 kg
Adjuvant	SAL13001, SMS1308404	764.88 kg
Excipient	SMS1302305, SMS13091, BMGM306931, BMGM213721	849.56 kg

FILLING

Batch number of final bulk: **A083**
Final batch number: **A083A**
Start date: **03-Jul-2013**
End date: **03-Jul-2013**
Filled containers: **18 535**
Volume filled: **50 ml**

IN PROCESS CONTROLS

In process controls BRSV antigen:

<u>Test</u>	<u>Start</u>	<u>End</u>	<u>Result</u>	<u>Thresholds</u>	<u>Conclusion</u>
Batch SBRS13001					
Cell controls:					
Microscopic inspection	25-Jan-2013	08-Feb-2013	No CPE	No CPE	Passed
Haemadsorption	08-Feb-2013	08-Feb-2013	No haemads.	No haemads.	Passed
Passage in vero cells	19-Feb-2013	05-Mar-2013	No CPE	No CPE	Passed
Sterility (before inac)	08-Feb-2013	22-Feb-2013	No growth	No growth	Passed
Antigen content (TCID50)	08-Feb-2013	18-Feb-2013	6.1*	>= 5.4*	Passed
Identity	08-Feb-2013	18-Feb-2013	Conform	Conform	Passed
Sterility (after inac)	13-Feb-2013	27-Feb-2013	No growth	No growth	Passed
Freedom from live virus	15-Feb-2013	08-Mar-2013	No CPE	No CPE	Passed
pH	11-Feb-2013	11-Feb-2013	7.6	7.2 - 8.2	Passed
* Log10/ml					

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In process controls BRSV antigen:

<u>Test</u>	<u>Start</u>	<u>End</u>	<u>Result</u>	<u>Thresholds</u>	<u>Conclusion</u>
Batch SBRS13002					
Cell controls:					
Microscopic inspection	01-Feb-2013	15-Feb-2013	No CPE	No CPE	Passed
Haemadsorption	15-Feb-2013	15-Feb-2013	No haemads.	No haemads.	Passed
Passage in vero cells	19-Feb-2013	05-Mar-2013	No CPE	No CPE	Passed
Sterility (before inac)	15-Feb-2013	01-Mar-2013	No growth	No growth	Passed
Antigen content (TCID50)	18-Feb-2013	28-Feb-2013	5.9*	>= 5.4*	Passed
Identity	18-Feb-2013	28-Feb-2013	Conform	Conform	Passed
Sterility (after inac)	20-Feb-2013	06-Mar-2013	No growth	No growth	Passed
Freedom from live virus	01-Mar-2013	22-Mar-2013	No CPE	No CPE	Passed
pH	18-Feb-2013	18-Feb-2013	7.6	7.2 - 8.2	Passed
* Log10/ml					

In process controls PI3 antigen:

<u>Test</u>	<u>Start</u>	<u>End</u>	<u>Result</u>	<u>Thresholds</u>	<u>Conclusion</u>
Batch SPI313001					
Cell controls:					
Microscopic inspection	04-Jan-2013	18-Jan-2013	No CPE	No CPE	Passed
Haemadsorption	18-Jan-2013	18-Jan-2013	No haemads.	No haemads.	Passed
Passage in vero cells	22-Jan-2013	05-Feb-2013	No CPE	No CPE	Passed
Sterility (before inac)	16-Jan-2013	30-Jan-2013	No growth	No growth	Passed
Antigen content (TCID50)	15-Jan-2013	25-Jan-2013	7.6*	>= 7.3*	Passed
Identity	15-Jan-2013	25-Jan-2013	Conform	Conform	Passed
Sterility (after inac)	17-Jan-2013	31-Jan-2013	No growth	No growth	Passed
Freedom from live virus	18-Jan-2013	08-Feb-2013	No CPE	No CPE	Passed
pH	15-Jan-2013	15-Jan-2013	7.7	7.2 - 8.2	Passed
* Log10/ml					

In process controls M. haemolytica antigen:

<u>Test</u>	<u>Start</u>	<u>End</u>	<u>Result</u>	<u>Thresholds</u>	<u>Conclusion</u>
Batch LMHB002202					
Purity reconstituted WS	20-Oct-2012	21-Oct-2012	Pure	Pure	Passed
Purity primary inoculum	21-Oct-2012	22-Oct-2012	Pure	Pure	Passed
Identity primary inoculum	24-Oct-2012	24-Oct-2012	Conform	Conform	Passed
Purity secondary inoculum	22-Oct-2012	23-Oct-2012	Pure	Pure	Passed
Purity fermentor inoculum	22-Oct-2012	23-Oct-2012	Pure	Pure	Passed
Purity fermentor culture	22-Oct-2012	23-Oct-2012	Pure	Pure	Passed
Iron regulated protein	04-Dec-2012	04-Dec-2012	Present	Present	Passed
Inactivation	23-Oct-2012	13-Nov-2012	No growth	No growth	Passed
Sterility	26-Oct-2012	09-Nov-2012	No growth	No growth	Passed
Formaldehyde	30-Oct-2012	30-Oct-2012	1 mg/ml	< 2 mg/ml	Passed
Antigen content	07-Nov-2012	07-Nov-2012	1.50 x 10 ¹¹	*n.a.	Passed
pH	29-Oct-2012	29-Oct-2012	6.6	6.3-7.2	Passed
Specific gravity	29-Oct-2012	29-Oct-2012	1035	N.a.	Passed
* cells/ml					

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In process controls M. haemolytica antigen:

<u>Test</u>	<u>Start</u>	<u>End</u>	<u>Result</u>	<u>Thresholds</u>	<u>Conclusion</u>
Batch LMHB002301					
Purity reconstituted WS	19-Feb-2013	20-Feb-2013	Pure	Pure	Passed
Purity primary inoculum	20-Feb-2013	21-Feb-2013	Pure	Pure	Passed
Identity primary inoculum	22-Feb-2013	22-Feb-2013	Conform	Conform	Passed
Purity secondary inoculum	21-Feb-2013	22-Feb-2013	Pure	Pure	Passed
Purity fermentor inoculum	21-Feb-2013	22-Feb-2013	Pure	Pure	Passed
Purity fermentor culture	21-Feb-2013	22-Feb-2013	Pure	Pure	Passed
Iron regulated protein	19-Mar-2013	19-Mar-2013	Present	Present	Passed
Inactivation	22-Feb-2013	15-Mar-2013	No growth	No growth	Passed
Sterility	01-Mar-2013	15-Mar-2013	No growth	No growth	Passed
Formaldehyde	27-Feb-2013	27-Feb-2013	1 mg/ml	< 2 mg/ml	Passed
Antigen content	19-Mar-2013	19-Mar-2013	1.88 10 ¹¹ *	n.a.	Passed
pH	01-Mar-2013	01-Mar-2013	6.6	6.3-7.2	Passed
Specific gravity	01-Mar-2013	01-Mar-2013	1038	N.a.	Passed
* cells/ml					

In process controls final product:

<u>Test</u>	<u>Start</u>	<u>End</u>	<u>Result</u>	<u>Thresholds</u>	<u>Conclusion</u>
Filling volume	03-Jul-2013	03-Jul-2013	52 ml	≥ 51 ml	Passed