



## Summary of Studies Supporting USDA Product Licensure

Establishment Name	Colorado Serum Company
USDA Vet Biologics Establishment Number	188
Product Code	2701.02
True Name	Pasteurella Multocida Bacterin
Tradename(s) / Distributor or Subsidiary (if different from manufacturer)	BunnyVac - No distributor specified
Date of Compilation Summary	October 28, 2021

**Disclaimer: Do not use the following studies to compare one product to another. Slight differences in study design and execution can render the comparisons meaningless.**

<b>Study Type</b>	Efficacy								
<b>Pertaining to</b>	Pasteurella Multocida Bacterin								
<b>Study Purpose</b>	To demonstrate efficacy against <i>Pasteurella multocida</i> (commonly referred to as “snuffles”), which is predominantly an upper respiratory disease.								
<b>Product Administration</b>	Two doses injected subcutaneously 4 weeks apart for two different groups, Group A and Group B. Group C was a placebo-vaccinated group.								
<b>Study Animals</b>	30 New Zealand White rabbits 12 weeks old, 10 rabbits per vaccination group. Both male and female. All seronegative for <i>Pasteurella multocida</i> antibody.								
<b>Challenge Description</b>	21 days after the second vaccine dose was administered, all rabbits were challenged with live <i>Pasteurella multocida</i> .								
<b>Interval observed after challenge</b>	All rabbits were observed for 15 days post-challenge.								
<b>Results</b>	<table border="1"> <thead> <tr> <th><b>Summary of Observations</b></th> <th>Group A (Vaccine)</th> <th>Group B (Vaccine)</th> <th>Group C (Placebo)</th> </tr> </thead> <tbody> <tr> <td><b>Mortality* S/T</b></td> <td>10/10</td> <td>10/10</td> <td>4/10</td> </tr> </tbody> </table> <p><b>Mortality*</b> = Survivors/Total. A rabbit was considered affected if mortality was due to <i>Pasteurella multocida</i>.</p> <p>Raw data on the following page.</p>	<b>Summary of Observations</b>	Group A (Vaccine)	Group B (Vaccine)	Group C (Placebo)	<b>Mortality* S/T</b>	10/10	10/10	4/10
<b>Summary of Observations</b>	Group A (Vaccine)	Group B (Vaccine)	Group C (Placebo)						
<b>Mortality* S/T</b>	10/10	10/10	4/10						
<b>USDA Approval Date</b>	February 6, 2013								

**PASTEURELLA MULTOCIDA BACTERIN**  
**Code 2701.02**  
**RABBIT EFFICACY STUDY**

**GROUP C (Placebo) POST CHALLENGE MORTALITY**

No. - ID	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15
1 - 20	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
2 - 13	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
3 - 23	S	S	S	S	S	S	S	D							
4 - 8	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
5 - 22	S	S	S	S	S	S	D								
6 - 3	S	S	S	D											
7 - 11	S	S	S	S	S	D									
8 - 6	S	S	S	S	D										
9 - 28	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
10 - 24	S	S	S	S	S	S	D								

Survive = S

D = Dead

**GROUP C (Placebo) POST CHALLENGE MORTALITY**

Post-Challenge	Dead/Total
Day 1	0/10
Day 2	0/10
Day 3	0/10
Day 4	1/10
Day 5	2/10
Day 6	3/10
Day 7	5/10
Day 8	6/10
Day 9	6/10
Day 10	6/10
Day 11	6/10
Day 12	6/10
Day 13	6/10
Day 14	6/10
Day 15	6/10

<b>Study Type</b>	Safety		
<b>Pertaining to</b>	Pasteurella Multocida Bacterin		
<b>Study Purpose</b>	To demonstrate safety of Pasteurella Multocida Bacterin under typical use conditions.		
<b>Product Administration</b>	Two doses injected subcutaneously 3-4 weeks apart		
<b>Study Animals</b>	155 New Zealand White rabbits and 153 California breed rabbits at three different locations.		
<b>Challenge Description</b>	NA		
<b>Interval Observed after Vaccination</b>	All rabbits were observed at 15 minutes and 2 hours on day of vaccination, daily for 14 days post-vaccination		
<b>Results</b>	<u>Location</u>	<u>No. Vaccinates</u>	<u>Adverse Reactions</u>
			PV-1    PV-2
	1	70 NZ, 28 C	0/98 *    0/96
	2	85 NZ, 0 C	0/85    0/85
	3	0 NZ, 125 C	0/125    0/125
	Key: NZ = New Zealand, C =California, PV=Post-Vaccination		
	* Two NZ rabbits died during the study and licensee determined that both deaths were not related to the study or the vaccine.		
<b>USDA Approval Date</b>	November 20, 2012		