

The influence of the product on the key organisms of the canine skin was examined.

### Information about the tested product:

#### Manufacturer:

PetOpCo, LLC dba WagWell, Silver Falcon Capital  
2820 Selwyn Ave, Ste 350,  
North Carolina, 28209 Charlotte  
USA

#### Name of the product:

Paw Balm

<b>Product type:</b>	Ingredient
<b>Application:</b>	Leave-on
<b>Dilution:</b>	No
<b>Sample received:</b>	20 June 2024
<b>Test Start:</b>	26 June 2024
<b>Test End:</b>	02 July 2024
<b>Test Standard:</b>	<b>MyMicrobiome Standard 58.10. Canine</b>
<b>Test result:</b>	<b>1.7</b>
<b>Certification:</b>	granted

## Test description

The MyMicrobiome Standard evaluates the influence of pet care products and pharmaceuticals on the microbial key players of canine skin.

An intact skin microbiome has a fundamental influence on skin health. Skin-friendly products must also be microbiome-friendly and ensure the maintenance of the balance among the skin microorganisms.

Every pet's microbiome is unique. Each pet, however, harbors a characteristic composition of bacteria, viruses and fungi. The test examines the product's influence on the key organisms typical for canine skin and thus offers a standardized procedure.

## Various aspects are examined:

### The microbial quality of the product.

To be evaluated according to our standard, the product needs to be free of contaminants. This is verified in the microbial quality test.

### The influence of the product on the natural, healthy skin balance.

*Staphylococcus pseudintermedius* is a bacterium found in the fur of most dogs. Under certain circumstances, the bacterium can colonize the surface of the skin, the hair follicles and occasionally also deeper layers of the skin. When the microclimate of the skin changes, the bacteria can multiply and then cause skin infections. The skin-commensal bacterium *Staphylococcus epidermidis* produces antimicrobial peptides (so-called bacteriocins) and regulates skin pH, which keeps potentially skin-harmful microorganisms, such as *Staphylococcus pseudintermedius* in check. The product should not disturb the balance between skin-friendly and skin-harmful bacteria. This sensitive balance is investigated in conjunction with the product.

### The influence of the product on the bacterial diversity of the canine skin.

Canine skin is colonized by a certain set of microorganisms, and it is particularly important to maintain this biodiversity to keep the skin healthy. The influence of the product on the respective microbial composition is examined in the test. The aim is to find as many key organisms as possible after contact with the product.

### The influence of the product on the growth behavior of the microbes of the canine skin.

In addition to the diversity of the microorganisms, the growth of the individual key organisms should not be influenced by the product. The key organisms are brought into direct and indirect contact with the product and their growth is observed.

### Results

#### The microbiological quality of the product.

The prerequisite for the test for microbial friendliness is the microbiological quality of the product based on DIN ISO 17516. The following table contains the limit values for contaminants that must be observed.

Types of organisms	Limit values
<b>Total aerobic microbial count (TAMC) and total combined yeasts/ moulds count (TYMC)</b>	≤ 20 cfu*/g or ml

\* colony forming units (cfu)

#### Results microbiological quality

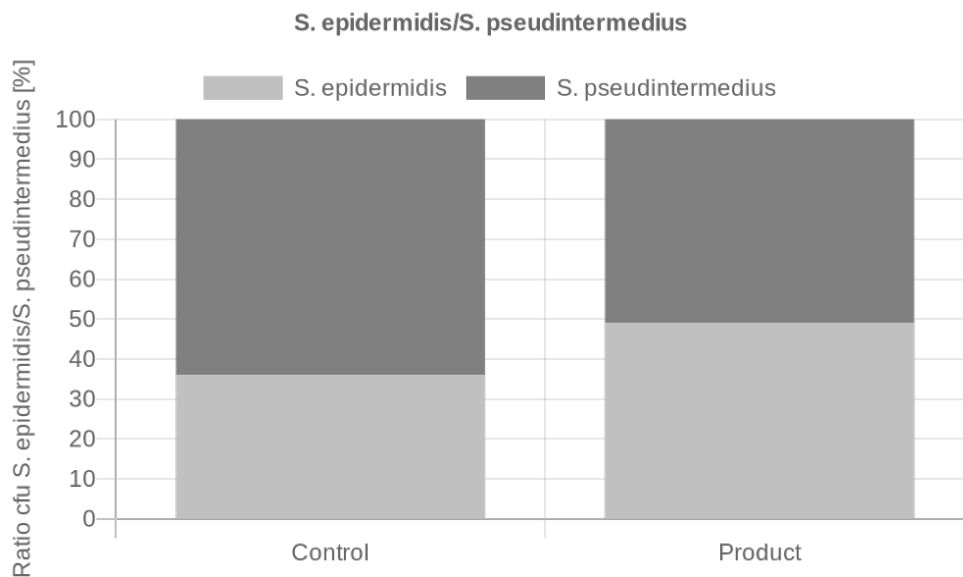
Parameter	Sample no.: 24.892.58.1
TAMC and TYMC [cfu/0,1 ml]	< 20

The microbiological quality of the product is fulfilled.

## Results

### The influence of the product on the natural, healthy skin balance.

A co-culture of *S. epidermidis* and *S. pseudintermedius* is incubated with the product for 15 min (rinse-off) or 4h (leave-on). Bacterial counts are determined, the ratio of the two microbes to each other is assessed and compared to the control sample (PBS).

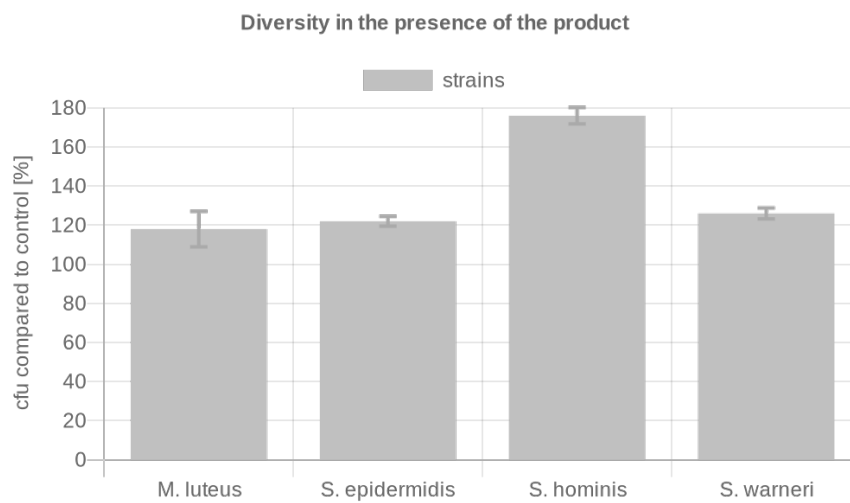


	cfu/ml		Ratio Product/ Control	Grade
	<i>S. epidermidis</i>	<i>S. pseudintermedius</i>		
<b>Control</b>	14700	25766.7	1.7	<b>1.0</b>
<b>Product</b>	51066.7	54133.3		

## Results

### The influence of the product on the microbial diversity of the canine skin.

A co-culture of key organisms of the canine skin is incubated with the product for 15 min (rinse-off) or 4h (leave-on). Bacterial colonies are counted, and the ratio of the cfu in the presence of the product compared to the control (PBS) is determined.



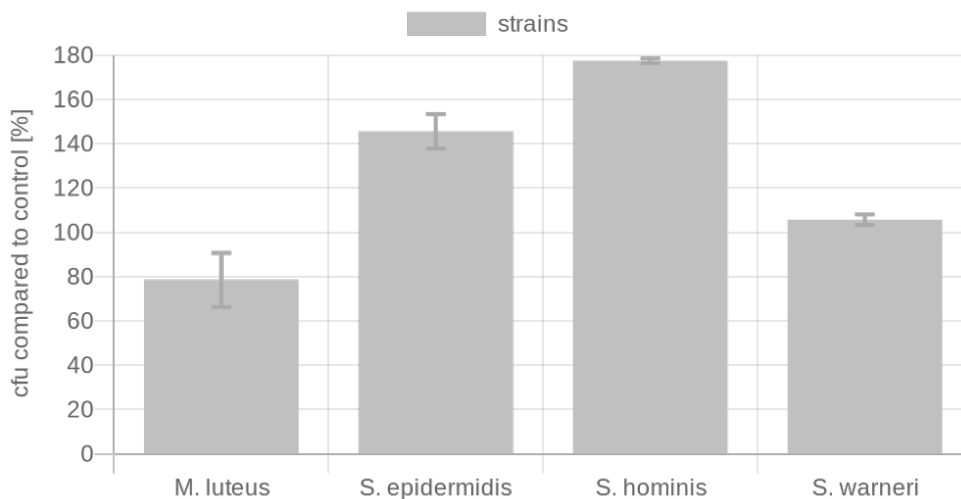
Key-Microbe	t=	4h	Rating
	cfu/ml		
<i>M. luteus</i>	Control	466,7	1
	Product	550	
<i>S. epidermidis</i>	Control	2333,3	1
	Product	2850	
<i>S. hominis</i>	Control	2725	3
	Product	4800	
<i>S. warneri</i>	Control	5866,7	2
	Product	7366,7	
<b>Overall rating:</b>			<b>1.8</b>

## Results

### The influence of the product on the growth behavior of the microbes of the canine skin – directly.

The influence of the product on the growth of each individual key organism is investigated and the ratio of the cfu in the presence of the product is calculated in % relative to the control sample (PBS). Product contact with microorganisms is direct.

Growth in the presence of the product - direct



Key-Microbe	cfu/ml		Rating
	Control	Product	
<i>M. luteus</i>	Control	139.7	2
	Product	109.7	
<i>S. epidermidis</i>	Control	870	2
	Product	1266.7	
<i>S. hominis</i>	Control	1373.3	3
	Product	2436.7	
<i>S. warneri</i>	Control	9250	1
	Product	9780	
<b>Overall rating:</b>			<b>2.0</b>

## Results

The results are evaluated with grades from 1 (one) to 3 (three).

The product has passed if it obtains grades between 1.0 and 2.0.

1.0 – 2.0 = Microbiome-friendly | 2.1 – 3.0 = Microbiome-influencing

Test	Grade
Balance of the skin microbiome	1.0
Diversity of the skin microbiome (x2)	1.8
Product contact direct (x2)	2.0
<b>Overall grade</b>	<b>1.7</b>

**With an overall grade of 1.7 the seal „Microbiome-friendly“ is awarded according to MyMicrobiome Standard 58.10. Canine.**

Place, Date: Balzers, 18 July 2024

Responsible person: Dr. Kristin Neumann

Signature:

