The influence of the test product on the key organisms of the respective body region was examined.

Information about the tested product:

Manufacturer:
BEEKMAN 1802
8075 Beacon Lake Dr., Suite 100
32809 Orlando, FL
USA

Name of the product:
Mushroom Milk

Product type:	Final product
Application:	Leave-on
Dilution:	No
Sample received:	24 July 2023
Test Start:	24 July 2023
Test End:	28 August 2023
Test Standard:	**MyMicrobiome Standard 18.10 Face**
Test result:	**1.7**
Certification:	Granted

Test description

The MyMicrobiome Standard evaluates cosmetic and personal care products, that encounter the skin or mucous membrane, in terms of their influence on the microbiome located at a specific body site.

An intact skin microbiome has a fundamental influence on skin health. Products which are to be skin-friendly must also be Microbiome-friendly in order not to unbalance the skin of the user.

The MyMicrobiome Standard evaluates the influence of cosmetic and personal care products on the microbial key players of a specific skin or mucous membrane area. The human microbiome is very individual from person to person.

Each area, however, harbors a characteristic composition of bacteria, viruses and fungi. The test examines the products influence on the key organisms typical for each skin area and thus offers a standardized procedure.

Various aspects are examined:

The microbial quality of the product.

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

The skin-commensal bacterium *Staphylococcus epidermidi*s keeps the skin with antimicrobial peptides (so-called bacteriocins) and pH adjustments healthy and keeps skin-harmful germs such as *Staphylococcus aureus* in check. The product should not disturb this 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 specific body region.

Each body region is colonized by a certain microbial composition. For a healthy skin it is particularly important to maintain this biodiversity. The influence of the product on the respective microbial mixture 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 specific body region.

In addition to the diversity of the specific microbiome, the growth or number of different key organisms should not be influenced by the product. This is investigated in a skin-product contact model. The key organisms are brought into direct and indirect contact with the product and their growth is observed.

Results

The microbial quality of the product.

The prerequisite for the test for microbial friendliness is the microbiological quality of the product. The following table contains the limit values that must be observed.

Types of organisms	Limit values	
	Products specially designed for children under 3 years, eye area or mucous skins	Other products
Total counts mesophilic, aerobic microorganisms (bacteria, yeasts, molds, (TAMC and TYMC))	≤ 1 x 10^2 cfu/g or ml[a]	≤ 1 x 10^3 cfu/g or ml[b]
Escherichia coli	Not detectable in 1g or 1 ml	Not detectable in 1g or 1 ml
Pseudomonas aeruginosa	Not detectable in 1g or 1 ml	Not detectable in 1g or 1 ml
Staphylococcus aureus	Not detectable in 1g or 1 ml	Not detectable in 1g or 1 ml
Candida albicans	Not detectable in 1g or 1 ml	Not detectable in 1g or 1 ml
a >200 cfu/g or ml, b >2000 cfu/g or ml		

Results Microbiological quality

Determination of TAMC, TYMC, absence of *E. coli*, *P. aeruginos*a and *S. aureus.*

The microbiological quality of the product according to DIN EN ISO 17516 is fulfilled.

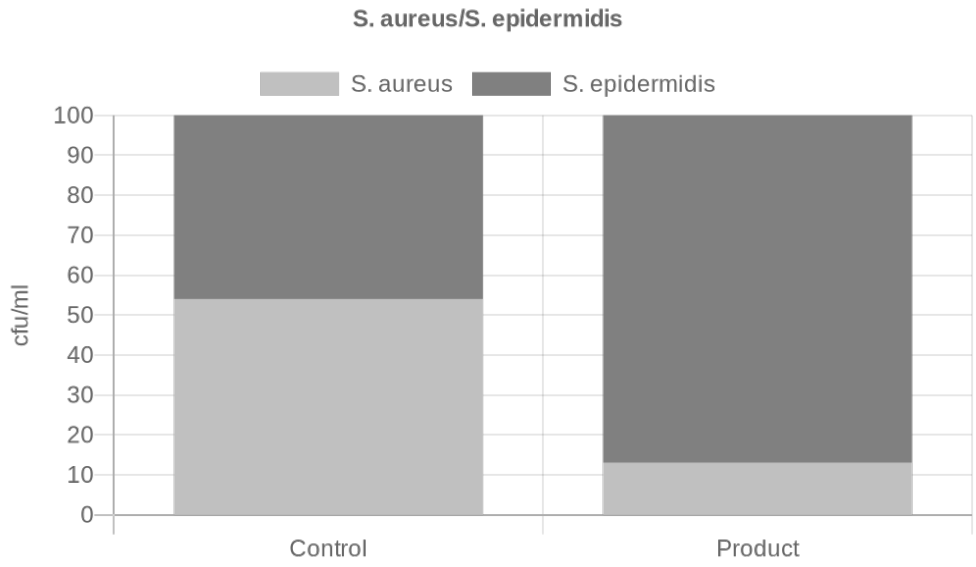
Parameter	Sample no.: 23.676.18.1
TAMC [cfu/0,1 ml]	< 1,0E+01
TYMC (incl. *Candida albicans*) [in 0,1 ml]	negative
***Escherichia coli* [in 0,1 ml]**	negative
***Pseudomonas aeruginosa* [in 0,1 ml]**	negative
***Staphylococcus aureus* [in 0,1 ml]**	negative

Results

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

A co-culture of *S. epidermidis* and *S. aureus* is incubated with the product.
The ratio of the two microbes to each other is determined.

Determination of the bacterial count at time t = 15 min (rinse-off) or 4h (leave-on).

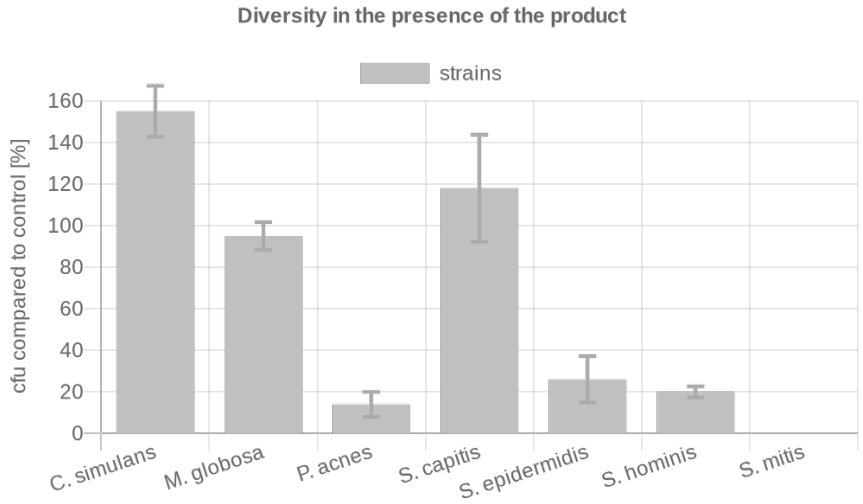


	cfu/ml		Ratio Product/ Control	Grade
	S. aureus	***S. epidermidis***		
Control	8766.7	7433.3	8.1	**1**
Product	526.7	3620		

Results – SEBACEOUS -

The influence of the product on the microbial diversity of the specific body region.

A co-culture of key organisms of the specific body region is incubated with the product for t = 15 min (rinse-off) or 4h (leave-on). The ratio of the microbes compared to the control (PBS) is determined.

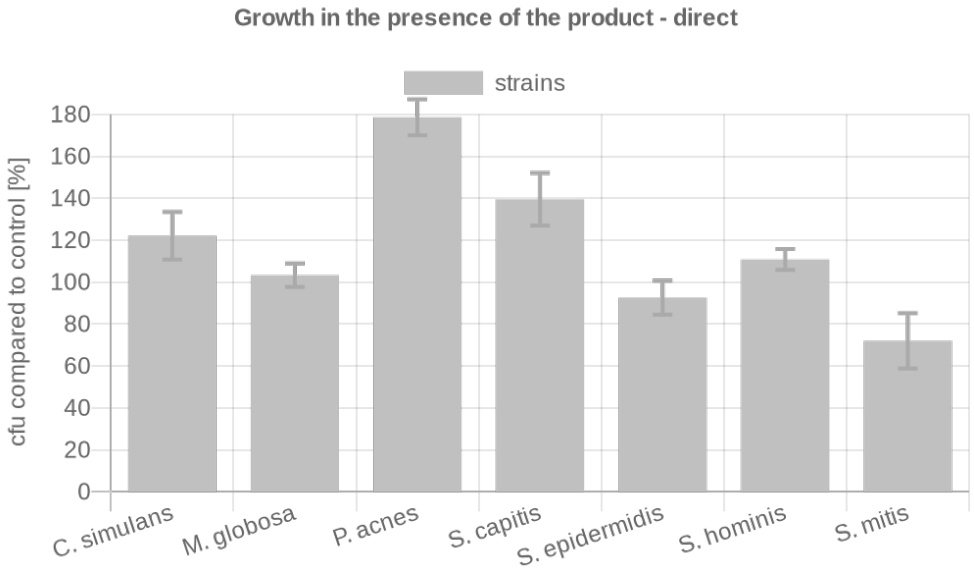


Key-Microbe	t=	4h	Rating
	cfu/ml		
C. simulans	Control	680	2
	Product	1053.3	
M. globosa confluence	Control	9200	1
	Product	8766.7	
P. acnes	Control	690	3
	Product	96.7	
S. capitis	Control	530	1
	Product	626.7	
S. epidermidis	Control	2110	3
	Product	550	
S. hominis	Control	2136.7	3
	Product	433.3	
S. mitis	Control		
	Product		
Overall rating:			**2.2**

Results – SEBACEOUS -

The influence of the product on the growth behavior of the microbes of the specific body region – directly.

The influence of the product on the growth of each individual microbe of the key organisms of the specific body region is investigated and put in relation to the control (PBS). Product contact with the microorganisms is directly.

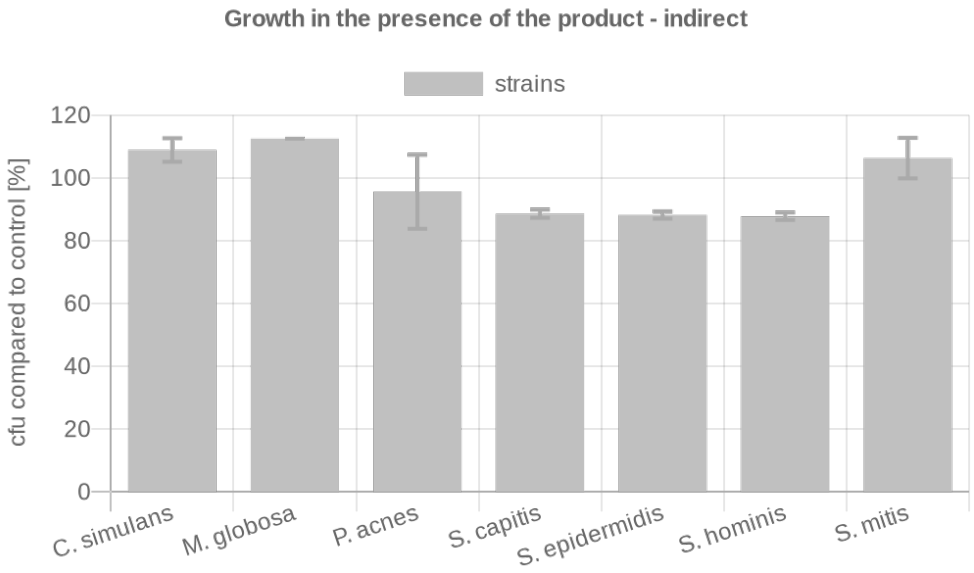


Key-Microbe	cfu/ml		Rating
C. simulans	Control	249.3	1
	Product	304.3	
M. globosa confluence	Control	100	1
	Product	103.3	
P. acnes	Control	185.3	3
	Product	331	
S. capitis	Control	265.7	2
	Product	370.7	
S. epidermidis	Control	497.3	2
	Product	460.3	
S. hominis	Control	580.3	1
	Product	643	
S. mitis	Control	133.7	2
	Product	96.3	
Overall rating:			**1.7**

Results – SEBACEOUS -

The influence of the product on the growth behavior of the microbes of the specific body region – indirectly.

The influence of the product on the growth of each individual microbe of the key organisms of the specific body region is investigated and put in relation to the control (PBS). The product contact to the microorganisms is indirect.



Key-Microbe	cfu/ml		Rating
C. simulans	Control	281.7	1
	Product	306.7	
M. globosa confluence	Control	80	1
	Product	90	
P. acnes	Control	203.3	1
	Product	194.3	
S. capitis	Control	310.3	2
	Product	275	
S. epidermidis	Control	540.7	2
	Product	477	
S. hominis	Control	543.3	2
	Product	477	
S. mitis	Control	127	1
	Product	135	
Overall rating:			**1.4**

Results

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

The product has passed up to grade 2.0.

Here the grade means:

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

Test	Grade
Balance of the skin microbiome	1
Diversity of the corresponding skin microbiome (x2)	2.2
Skin-product contact direct (x2)	1.7
Skin-product contact indirect	1.4
Overall grade	**1.7**

With an overall grade of 1.7 the seal „Microbiome-friendly“ is awarded according to MyMicrobiome Standard 18.10 Face.

Place, Date: Balzers, 28 August 2023

Responsible person: Dr. Kristin Neumann

Signature: