MyMicrobiome Standard
Test report no.: 210.322.56

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

Information about the tested product:

Manufacturer:
ICHIMARU PHARCOS Co., Ltd,
318-1, Asagi, Motosu-shi
Gifu 501-0475
Japan

Name of the product:
Fairy Flora K-1 (0,1% w/w)

Product class:

(X) Dry skin
MyMicrobiome Standard 18.10

( ) Sebaceous skin
MyMicrobiome Standard 18.10

( ) Moist skin
MyMicrobiome Standard 18.10

( ) Feet
MyMicrobiome Standard 22.10

( ) Vaginal tract
MyMicrobiome Standard 21.10

( ) Mouth
MyMicrobiome Standard 23.10

( ) Scalp
MyMicrobiome Standard 19.10

( ) Infant skin
MyMicrobiome Standard 20.10

Sample receipt:	16 October 2020
Test date/period:	18 March - 22 March 2021
Test result:	1,1
Approved yes/no:	yes; 07 May 2021

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Test description

The MyMicrobiome Standard evaluates cosmetic and personal care products, that come into contact with 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 epidermidis* 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. aeruginosa* and *S. aureus.*

Parameter	Sample no.: 210.322.56
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

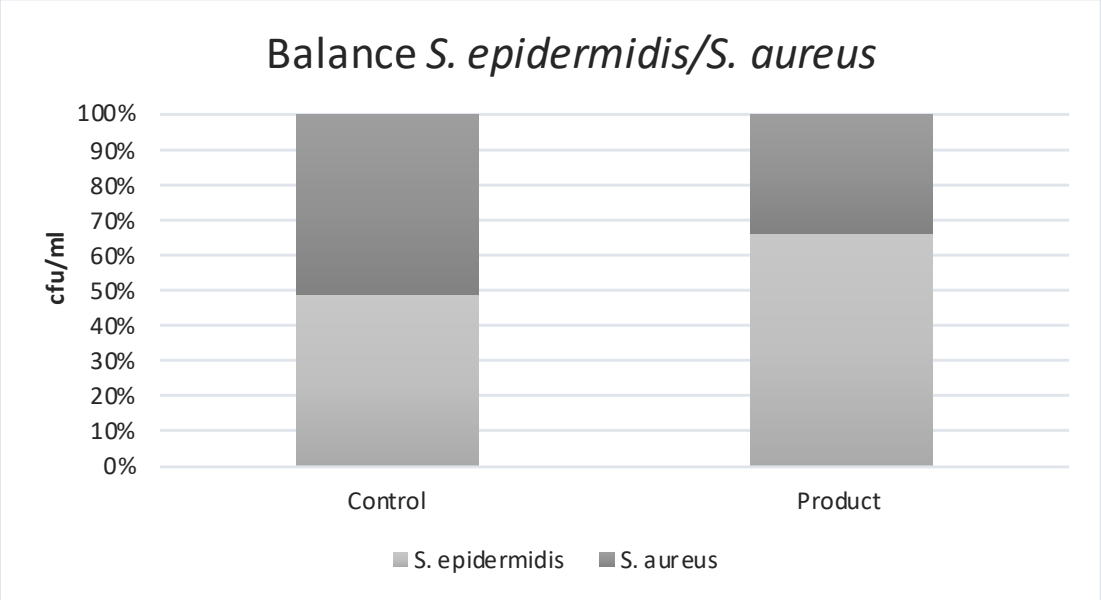
The microbiological quality of the product according to DIN EN ISO 17516 is fulfilled.

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 for 4 h. The ratio of the two microbes to each other is determined.

Determination of the bacterial count at time t = 4 h

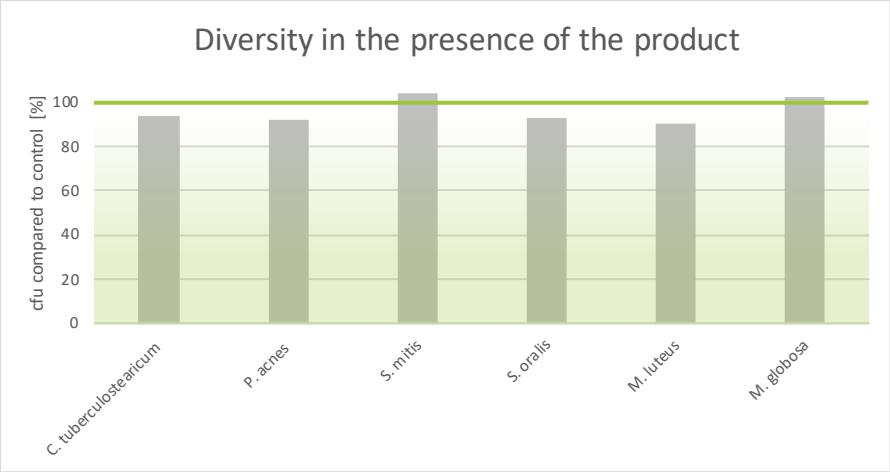


	cfu/ml		Ratio Product/ Control	Grade
	S. epidermidis	***S. aureus***		
Control	3,3E+02	3,4E+02	2,0	1
Product	9,3E+02	4,8E+02		

Results

- **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 4 h. The ratio of the bacteria compared to the control (PBS) is determined.



Key-Microbe	Time t=4 h	Rating
C. tuberculostearicum	**cfu/ml**	
Control	3,0E+02	1
Product	2,8E+02	
P. acnes		
Control	2,9E+03	2
Product	2,6E+03	
S. mitis		
Control	2,8E+02	1
Product	2,9E+02	
S. oralis		
Control	4,3E+02	1
Product	4,0E+02	
M. luteus		
Control	8,0E+02	1
Product	7,2E+02	
M. globosa		
Control	3,1E+03	1
Product	3,2E+03	
Overall rating:		1,2

Results

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

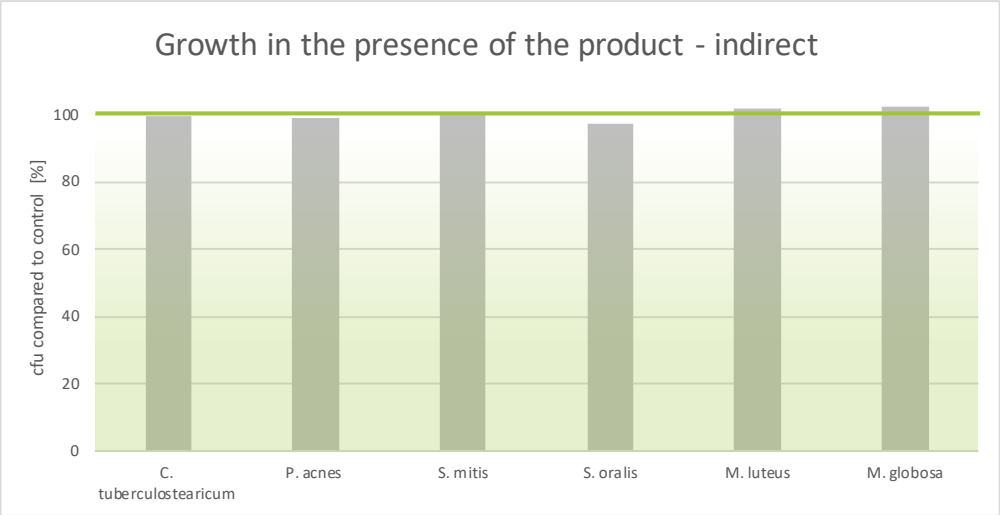
The influence of the product on the growth of each individual microbe of the key organisms of the specific body region is investigated and put in relation to the control (PBS). Product contact with the microorganisms is directly.

Key-Microbe	cfu /Plate		Rating
C. tuberculostearicum	Control	584	
	Product	532	2
P. acnes	Control	1844	
	Product	1872	1
S. mitis	Control	2064	
	Product	1988	1
S. oralis	Control	896	
	Product	876	1
M. luteus	Control	712	
	Product	708	1
M. globosa	Control	728	
	Product	732	1
Overall rating:			1,2

Results

- **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 /Plate		Rating
C. tuberculostearicum	Control	568	
	Product	564	1
P. acnes	Control	1924	
	Product	1904	1
S. mitis	Control	2104	
	Product	2116	1
S. oralis	Control	916	
	Product	892	1
M. luteus	Control	744	
	Product	756	1
M. globosa	Control	756	
	Product	772	1
Overall rating:			1,0

Results

The results are evaluated with grades from 1 (one) to 3 (three). If the product shows no or positive influence to the above-mentioned aspects, a grade of 1 is awarded respectively.

If only a very weak negative influence can be detected in the tests, the grade 2 is awarded and in case of a clearly negative influence, the product receives the grade 3.

The product has passed up to grade 2.0.

Here the grade means

1 = Microbiome-friendly 2 = Microbiome-neutral 3 = Microbiome-damaging.

Test	Grade
Balance of the skin microbiome	1,0
Diversity of the corresponding skin microbiome (x2)	1,2
Skin-product contact direct (x2)	1,2
Skin-product contact indirect	1,0
Overall grade	**1,1**

With an overall grade of 1,1 the seal „Microbiome-friendly“ is awarded.

Place, Date: Balzers, 07 May 2021

Responsible person: Dr. Kristin Neumann

Signature: