# MyMicrobiome Standard
# Test report no.: 210.322.55

**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:**
Biocellact ALOE VERA B (1% v/w)

**Product class:**

◯ Dry skin
MyMicrobiome Standard 18.10

◯ Vaginal tract
MyMicrobiome Standard 21.10

◯ Sebaceous skin
MyMicrobiome Standard 18.10

◯ Mouth
MyMicrobiome Standard 23.10

◯ Moist skin
MyMicrobiome Standard 18.10

(X) Scalp
MyMicrobiome Standard 19.10

◯ Feet
MyMicrobiome Standard 22.10

◯ Infant skin
MyMicrobiome Standard 20.10

| | |
|---|---|
| Sample receipt: | 01 October 2020 |
| Test date/period: | 18 March - 22 March 2021 |
| Test result: | 1,4 |
| 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.: 210.322.55 |
|---|---|
| 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 |

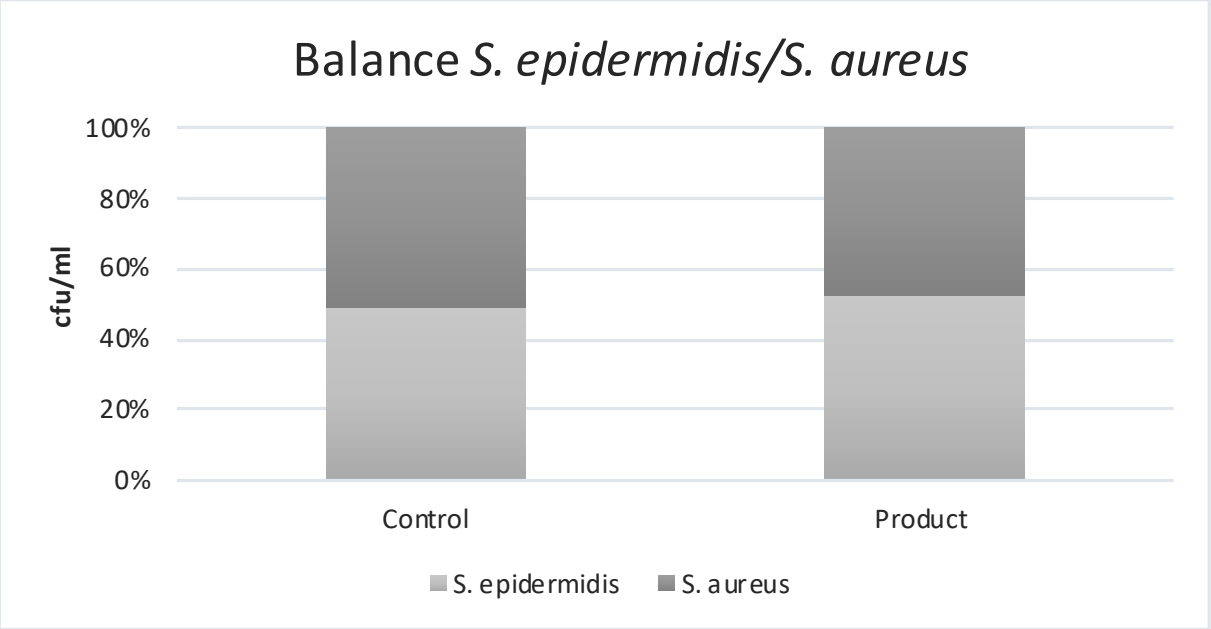
The microbiological quality of the product according to DIN EN ISO 17516 is fulfilled.

**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

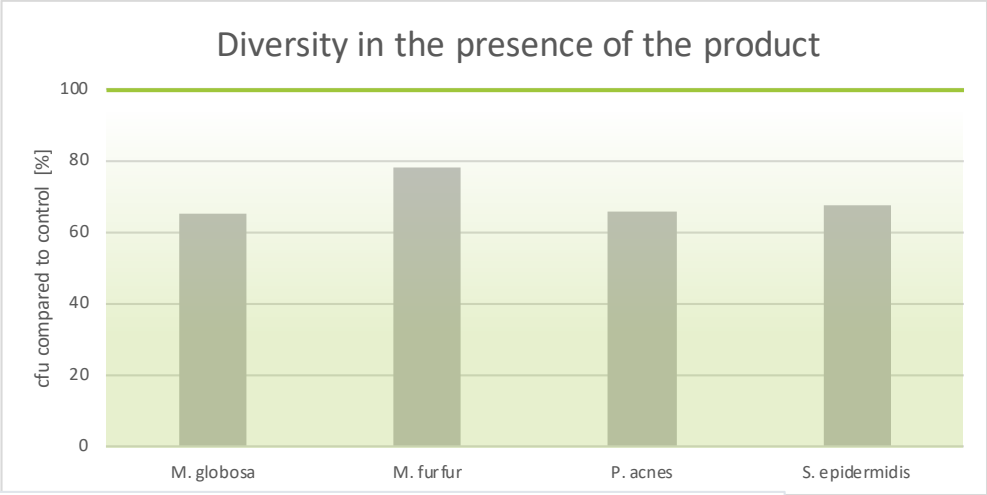



| | cfu/ml | | Ratio Product/ Control | Grade |
|---|---|---|---|---|
| | ***S. epidermidis*** | ***S. aureus*** | | |
| **Control** | 3,3E+02 | 3,4E+02 | 1,2 | 1 |
| **Product** | 1,6E+02 | 1,5E+02 | | |

**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.

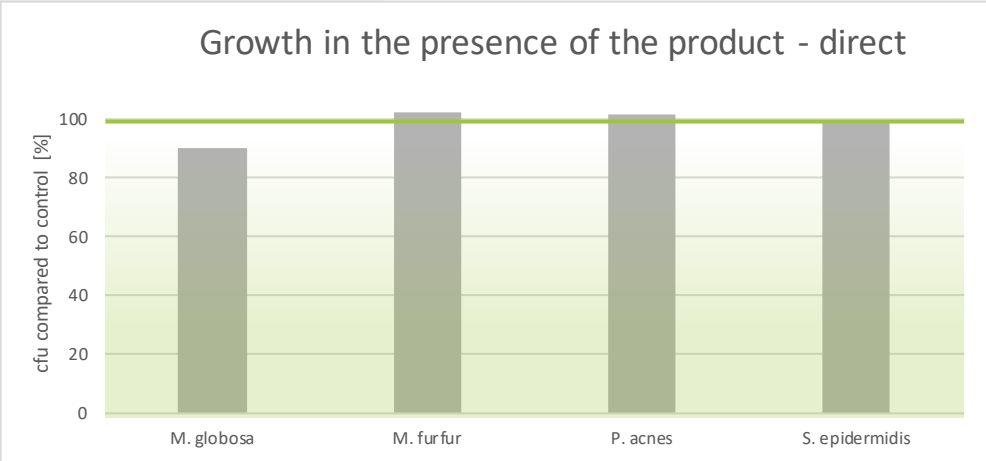



| Key-Microbe | Time t=4 h | Rating |
|---|---|---|
| ***M. globosa*** | **cfu/ml** | |
| Control | 3,2E+03 | 2 |
| Product | 2,1E+03 | |
| ***M. furfur*** | | |
| Control | 1,7E+03 | 2 |
| Product | 1,3E+03 | |
| ***P. acnes*** | | |
| Control | 3,2E+03 | 2 |
| Product | 2,1E+03 | |
| ***S. epidermidis*** | | |
| Control | 2,1E+03 | 2 |
| Product | 1,4E+03 | |
| **Overall rating:** | | 2,0 |

**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.

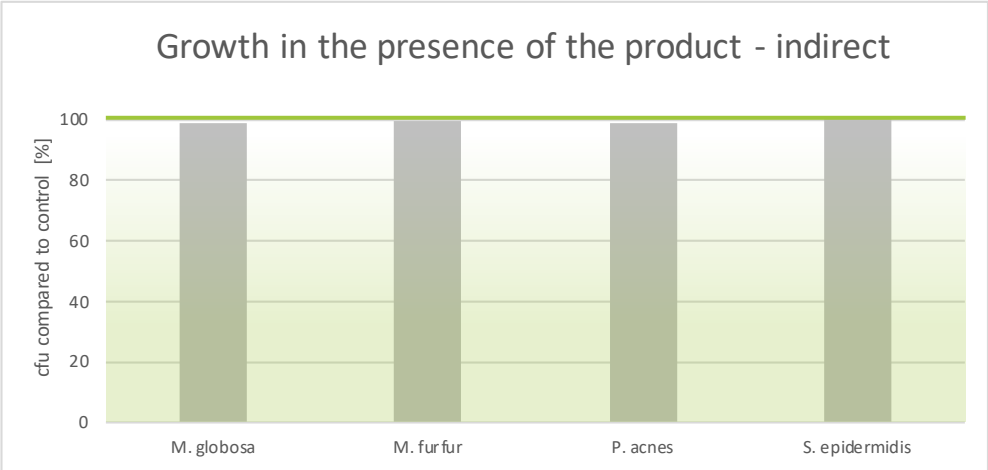



| Key-Microbe | cfu /Plate | | Rating |
|---|---|---|---|
| ***M. globosa*** | Control | 728 | |
| | Product | 656 | 2 |
| ***M. furfur*** | Control | 1084 | |
| | Product | 1108 | 1 |
| ***P. acnes*** | Control | 1844 | |
| | Product | 1876 | 1 |
| ***S. epidermidis*** | Control | 916 | |
| | Product | 908 | 1 |
| Overall rating: | | | 1,3 |

**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 |
|---|---|---|---|
| *M. globosa* | Control | 756 | |
| | Product | 748 | 1 |
| *M. furfur* | Control | 1076 | |
| | Product | 1072 | 1 |
| *P. acnes* | Control | 1924 | |
| | Product | 1908 | 1 |
| *S. epidermidis* | Control | 876 | |
| | Product | 884 | 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) | 2,0 |
| Skin-product contact direct (x2) | 1,3 |
| Skin-product contact indirect | 1,0 |
| **Overall grade** | **1,4** |

**With an overall grade of 1,4 the seal „Microbiome-friendly“ is awarded.**

Place, Date: Balzers, 07 May 2021

Responsible person: Dr. Kristin Neumann

Signature: