

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

### Information about the tested product:

**Manufacturer:**

A To Z Beauty LLC dba Cliganic  
440 N BARRANCA AVE, UNIT 3660  
COVINA  
USA

**Name of the product:**

Jojoba Oil

<b>Product type:</b>	Final product
<b>Application:</b>	Leave-On
<b>Dilution:</b>	No
<b>Sample received:</b>	10. January 2022
<b>Test Start:</b>	19. January 2022
<b>Test End:</b>	11. April 2022
<b>Test Standard:</b>	<b>MyMicrobiome Standard 18.11</b>
<b>Test result:</b>	<b>1.7</b>
<b>Certification:</b>	Granted

## Test description

The MyMicrobiome Standard evaluates the influence of cosmetics, personal care products and pharmaceuticals on microbial key players located at specific skin or mucous membrane sites.

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 of the user.

Every person's microbiome is unique. Each body area, however, harbors a characteristic composition of bacteria, viruses and fungi. The test examines the product's 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.

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.

The skin-commensal bacterium *Staphylococcus epidermidis* produces antimicrobial peptides (so-called bacteriocins) and regulates skin pH, which keeps harmful microorganisms such as *Staphylococcus aureus* in check. The product should not disturb the balance between friendly and 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 set of microorganisms. For healthy microbiome, it is particularly important to maintain this biodiversity. 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 specific body region.

In addition to the diversity of the microorganisms in a specific body area, 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

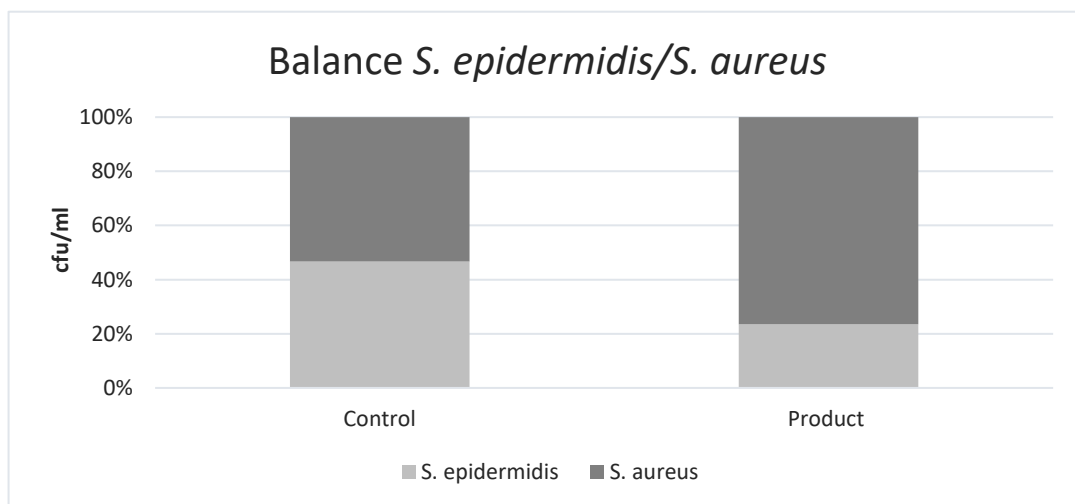
Parameter	Sample no.: {d.Testno}
TAMC and TYMC [cfu/0,1 ml]	< 20

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. aureus* 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).

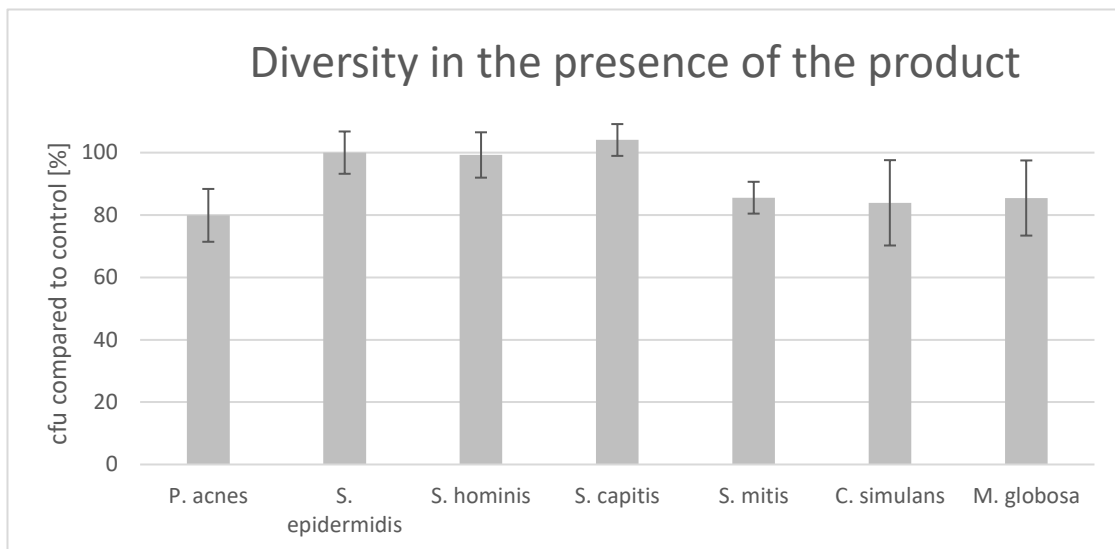


	cfu/ml		Ratio Product/ Control	Grade
	<i>S. epidermidis</i>	<i>S. aureus</i>		
<b>Control</b>	7.0E+03	7.9E+03	0.4	3.0
<b>Product</b>	5.7E+03	1.9E+04		

## Results – SEBACEOUS SKIN –

### 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 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.

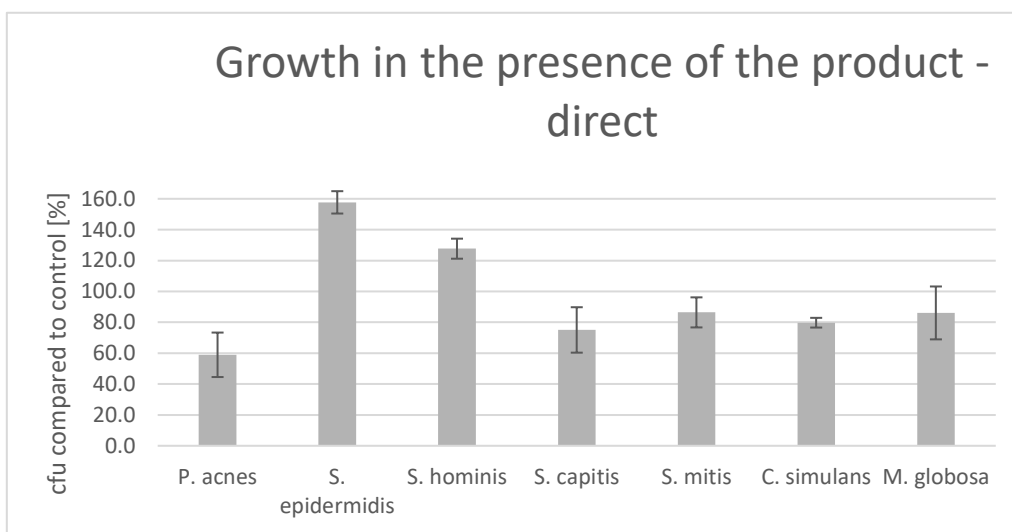


Key-Microbe	t=	4h	Rating
	cfu/ml		
<i>P. acnes</i>	Control	1.8E+03	2
	Product	1.4E+03	
<i>S. epidermidis</i>	Control	3.9E+03	1
	Product	3.9E+03	
<i>S. hominis</i>	Control	1.6E+03	1
	Product	1.5E+03	
<i>S. capitis</i>	Control	1.0E+03	1
	Product	1.1E+03	
<i>S. mitis</i>	Control	5.8E+03	1
	Product	4.9E+03	
<i>C. simulans</i>	Control	5.8E+02	2
	Product	4.9E+02	
<i>M. globosa</i>	Control	1.6E+03	2
	Product	1.4E+03	
Overall rating:			1.4

**Results – SEBACEOUS SKIN –**

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

The influence of the product on the growth of each individual key organism of the specific body region 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.

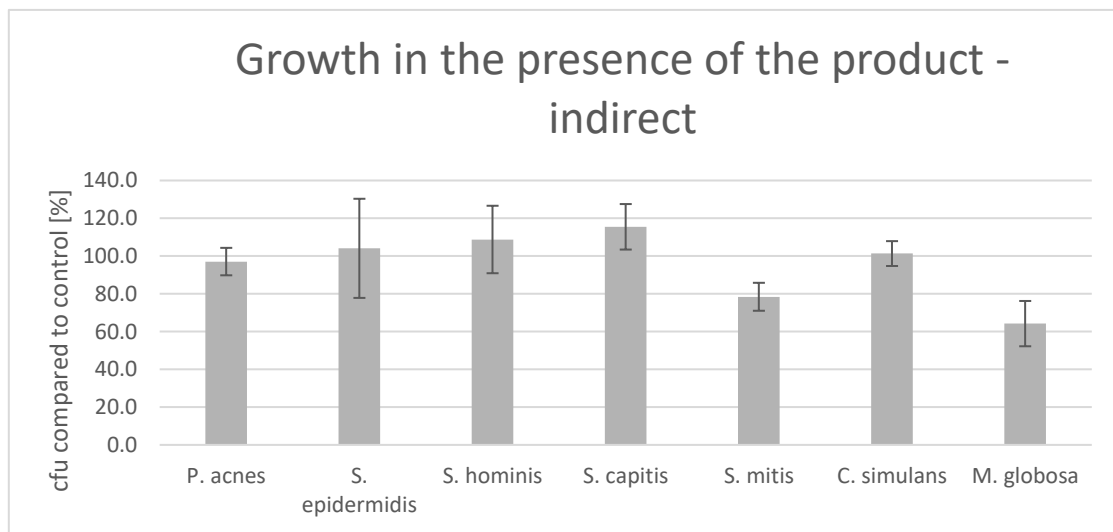


Key-Microbe	cfu /Plate		Rating
<i>P. acnes</i>	Control	902.7	3
	Product	532.0	
<i>S. epidermidis</i>	Control	718.7	2
	Product	1133.3	
<i>S. hominis</i>	Control	614.0	2
	Product	784.0	
<i>S. capitis</i>	Control	2501.3	2
	Product	1877.3	
<i>S. mitis</i>	Control	584.0	1
	Product	504.7	
<i>C. simulans</i>	Control	4106.7	2
	Product	3274.7	
<i>M. globosa</i>	Control	105.3	1
	Product	90.7	
Overall rating:			1.9

**Results – SEBACEOUS SKIN –**

**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 key organism of the specific body region 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 indirect.

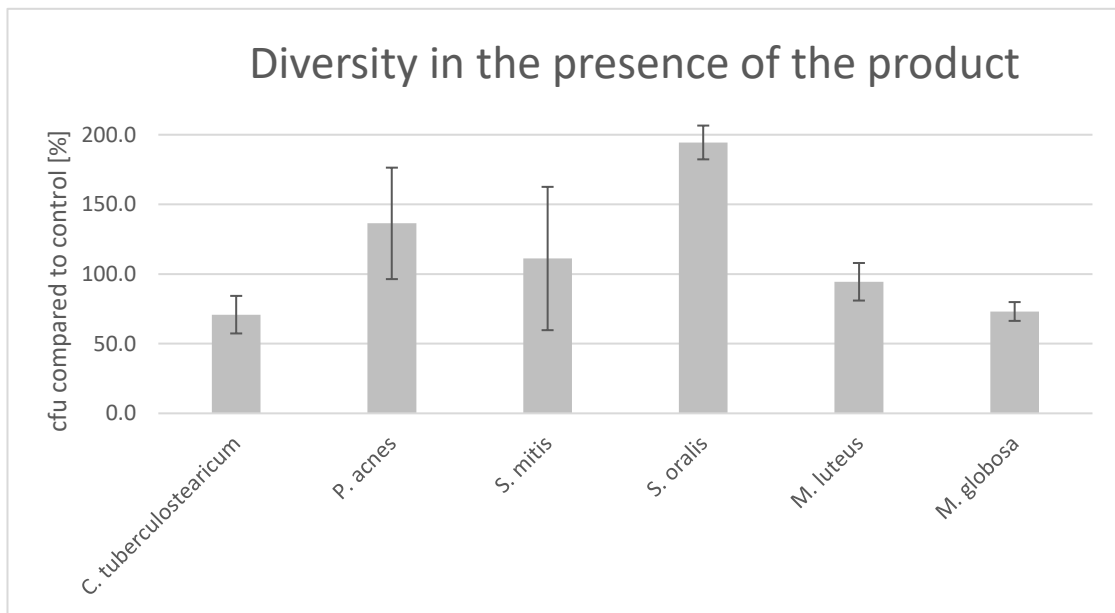


Key-Microbe	cfu /Plate		Rating
<i>P. acnes</i>	Control	908.0	1
	Product	881.3	
<i>S. epidermidis</i>	Control	1268.3	1
	Product	1320.0	
<i>S. hominis</i>	Control	217.0	1
	Product	236.0	
<i>S. capitis</i>	Control	1413.3	1
	Product	1632.0	
<i>S. mitis</i>	Control	516.0	2
	Product	404.7	
<i>C. simulans</i>	Control	3264.0	1
	Product	3306.7	
<i>M. globosa</i>	Control	131.3	3
	Product	84.3	
Overall rating:			1.4

**Results – DRY SKIN –**

**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.

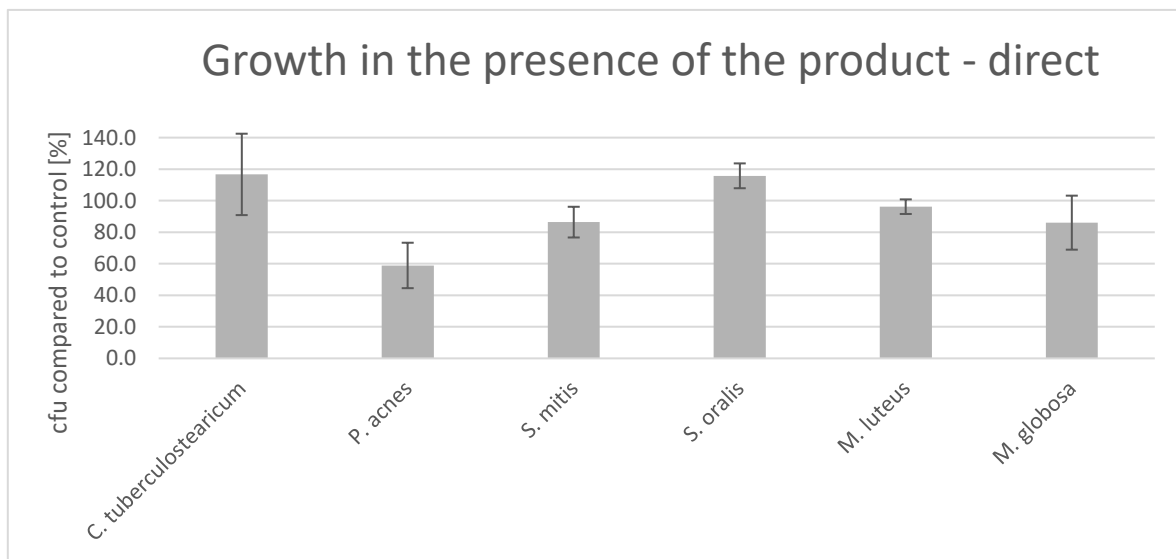


Key-Microbe	t=	4h	Rating
	cfu/ml		
<i>C. tuberculoostearicum</i>	Control	1.6E+02	2.0
	Product	1.1E+02	
<i>P. acnes</i>	Control	3.7E+01	2.0
	Product	5.0E+01	
<i>S. mitis</i>	Control	3.4E+02	1.0
	Product	3.7E+02	
<i>S. oralis</i>	Control	9.0E+01	3.0
	Product	1.8E+02	
<i>M. luteus</i>	Control	1.2E+02	1.0
	Product	1.1E+02	
<i>M. globosa</i>	Control	3.3E+04	2.0
	Product	2.4E+04	
Overall rating:			1.8

**Results – DRY SKIN –**

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

The influence of the product on the growth of each individual key organism of the specific body region 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.

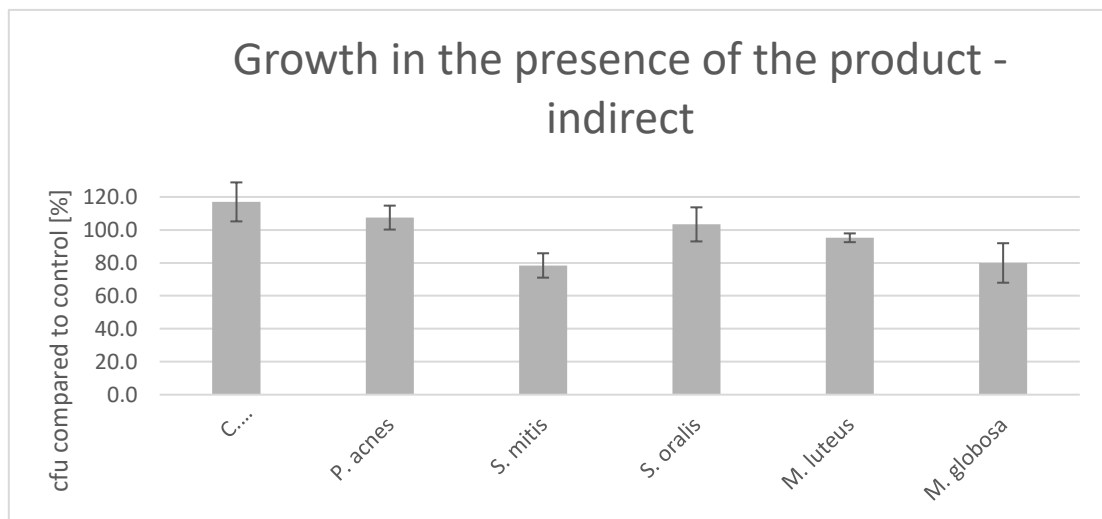


Key-Microbe	cfu /Plate		Rating
<i>C. tuberculostearicum</i>	Control	909.0	1
	Product	1060.7	
<i>P. acnes</i>	Control	902.7	3
	Product	532.0	
<i>S. mitis</i>	Control	584.0	2
	Product	504.7	
<i>S. oralis</i>	Control	19.0	1
	Product	22.0	
<i>M. luteus</i>	Control	4751.3	1
	Product	4571.0	
<i>M. globosa</i>	Control	105.3	1
	Product	90.7	
Overall rating:			1.5

**Results – DRY SKIN –**

**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 key organism of the specific body region 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 indirect.



Key-Microbe	cfu /Plate		Rating
<b><i>C. tuberculo</i></b>	Control	776.0	1
	Product	908.0	
<b><i>P. acnes</i></b>	Control	820.0	1
	Product	881.3	
<b><i>S. mitis</i></b>	Control	516.0	2
	Product	404.7	
<b><i>S. oralis</i></b>	Control	39.7	1
	Product	41.0	
<b><i>M. luteus</i></b>	Control	4676.7	1
	Product	4453.3	
<b><i>M. globosa</i></b>	Control	105.5	2
	Product	84.3	
Overall rating:			1.3

## Results

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

The product has passed if it obtains an overall grade 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	3.0
Diversity of the corresponding skin microbiome (x2) (sebaceous)	1.4
Diversity of the corresponding skin microbiome (x2) (dry)	1.8
Skin-product contact direct (x2) (sebaceous)	1.9
Skin-product contact direct (x2) (dry)	1.5
Skin-product contact indirect (sebaceous)	1.4
Skin-product contact indirect (dry)	1.3
Overall grade	1.7

With an overall grade of 1.7 the seal „Microbiome-friendly“ is awarded according to MyMicrobiome Standard 18.11.

Place, Date: Balzers, April 13<sup>th</sup>, 2022

Responsible person: Dr. Kristin Neumann

Signature:

