

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

Information about the tested product:

Manufacturer:

Essential Layer, Inc.
1857 Lombard St. 1st Floor
San Francisco, CA 94123, USA

Name of the product:

Cottonique Women's Low-Rise Contoured Brief – 2205 - 100% organic cotton

Product type:

Final Product

Fibre

Application:

Short body contact

Long body contact

Standard:

Face/Lips

MyMicrobiome Standard 38.10

Body / Neck / Chest / Hands

MyMicrobiome Standard 38.11

Back

MyMicrobiome Standard 38.10

Bottom / Thighs

MyMicrobiome Standard 38.10

Axillary vault

MyMicrobiome Standard 38.12

Scalp

MyMicrobiome Standard 39.10

Infant skin

MyMicrobiome Standard 40.10

Vaginal tract

MyMicrobiome Standard 41.10

Feet

MyMicrobiome Standard 42.10

Mouth

MyMicrobiome Standard 43.10

Nose

MyMicrobiome Standard 44.10

Vulvo-Vaginal

MyMicrobiome Standard 45.10

Sample receipt: 24 May 2024

Test result: 1.4

Test period: 04 June 2024 – 26 June 2024

Approved yes/no: yes

Test description

The MyMicrobiome Standard evaluates the influence of textiles and hygiene products on the microbial key players located at a 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.

The quality test ensures that the textile products are sterile so that our microbiological tests can be carried out with the skin microorganisms. Therefore, textiles are washed according to the manufacturers' instructions beforehand. A screening examines the occurrence of mesophilic and aerobic microorganisms. For decontamination, the products are UV-irradiated or autoclaved. Hygiene products are sterilized through UV light exposure, if necessary.

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

The commensal bacterium *Lactobacillus crispatus* is co-cultivated with the pathogenic bacteria *Gardnerella vaginalis*. The co-culture is brought in contact with the vaginal product to be tested, which should not disturb the balance between friendly and harmful bacteria.

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 skin, it is particularly important to maintain this biodiversity. The influence of the product on the respective microbial composition of the vulvo-vaginal area 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 skin area, the growth of the individual key organisms should not be influenced by the product. Each key organism of the vulvo-vaginal area is brought in contact with the product and their growth is observed.



MyMicrobiome Standard

Test report no.: 24.T023.45.2

Results

The microbiological 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 for contaminants that must be observed.

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

* colony forming units (cfu)

Results Microbiological quality

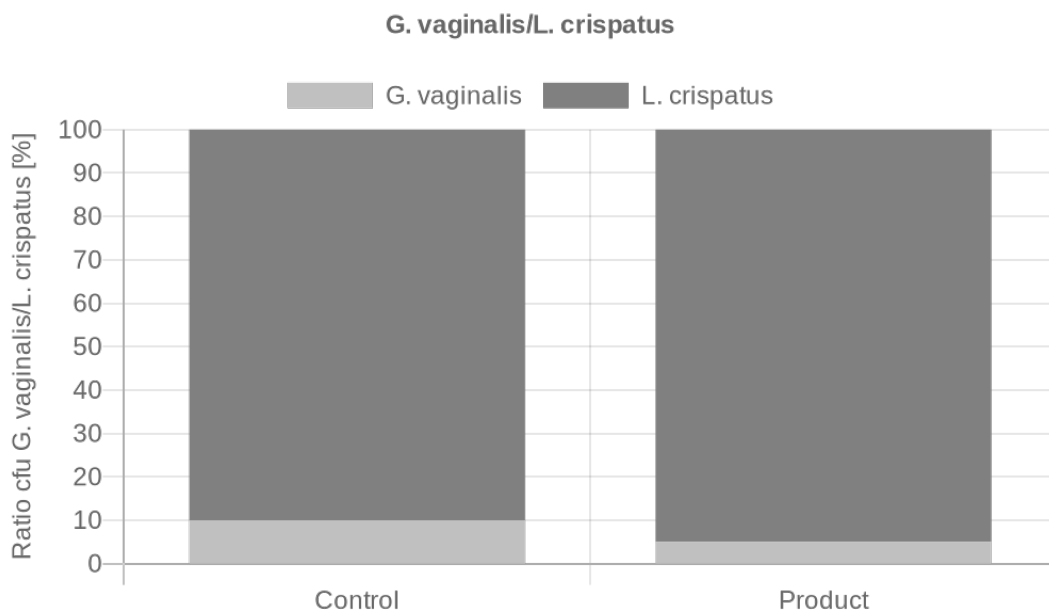
Parameter	Sample no.: 24.T019.45.2
TAMC and TYMC [cfu/0,1 ml]	< 20

The microbiological quality of the product is fulfilled.

Results

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

A co-culture of *L. crispatus* and *G. vaginalis* is incubated with the product for 15 min (short body contact) or 4h (long body contact). Bacterial counts are determined and the cfu ratio of the two bacteria in the presence of the product is assessed and compared to the control sample (PBS).

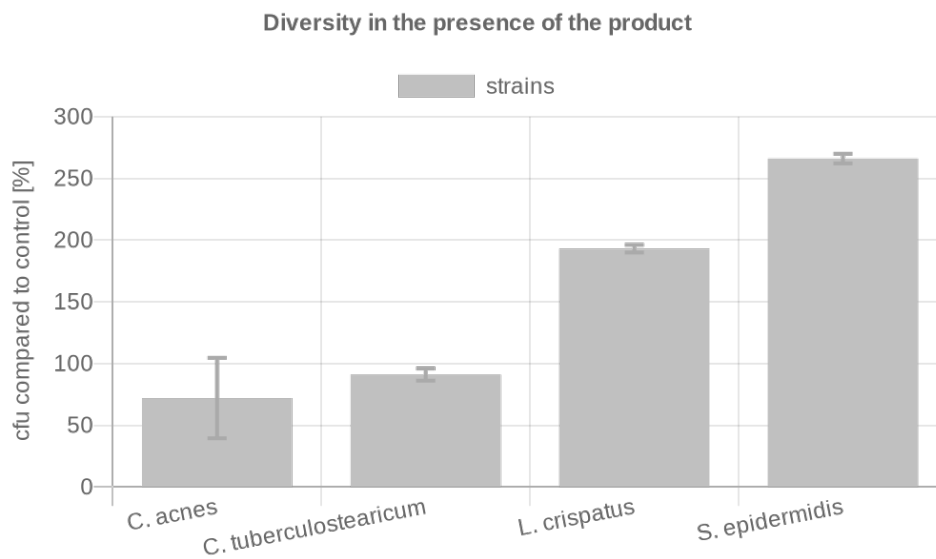


	cfu/ml t=4h		Ratio Product/ Control	Grade
	<i>L. crispatus</i>	<i>G. vaginalis</i>		
Control	1.3E+02	1.1E+03	2	1.0
Product	1.8E+02	3.0E+03		

Results

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

A co-culture of the key organisms present in the vulvo-vaginal area is incubated with the product for 15 min or 4 h. Bacterial colonies are counted, and the cfu ratios in the presence of the product are calculated in % relative to the control sample (PBS).

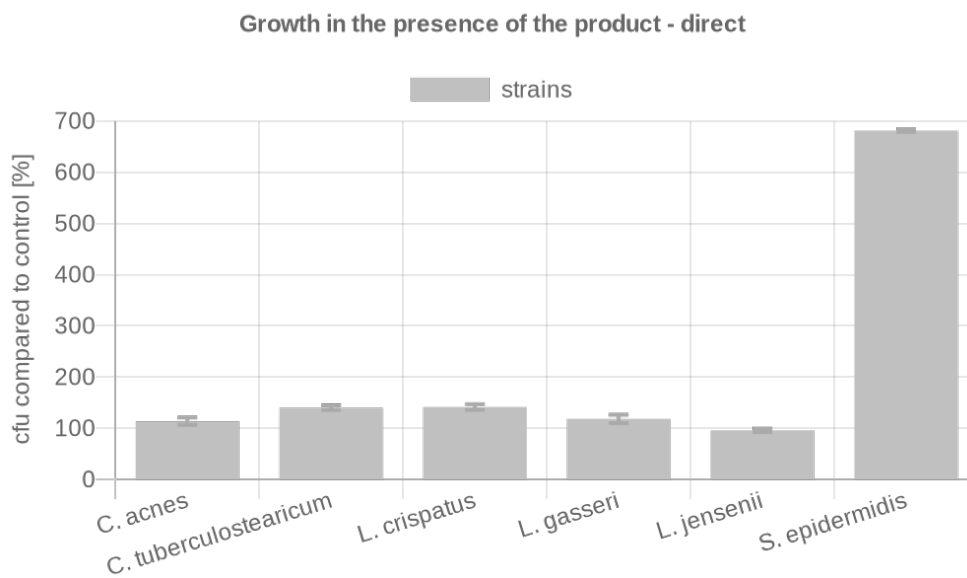


Key-Microbe	t= 4h		Rating
	cfu/ml		
<i>C. acnes</i>	Control	1.8E+02	2
	Product	1.3E+02	
<i>C. tuberculostearicum</i>	Control	3.9E+02	2
	Product	3.5E+02	
<i>L. crispatus</i>	Control	2.1E+03	1
	Product	4.1E+03	
<i>S. epidermidis</i>	Control	3.4E+02	2
	Product	9.0E+02	
Overall rating:			1.8

Results

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

The influence of the product on the growth of each individual key organism of the vulvo-vaginal area is investigated and the cfu ratio in the presence of the product is calculated in % relative to the control sample (PBS).



Key-Microbe	t= 4h		Rating
	cfu/ml		
<i>C. acnes</i>	Control	4.8E+02	1
	Product	5.5E+02	
<i>C. tuberculoostearicum</i>	Control	9.7E+01	1
	Product	1.4E+02	
<i>L. crispatus</i>	Control	5.6E+02	1
	Product	7.9E+02	
<i>L. gasseri</i>	Control	6.2E+01	1
	Product	7.3E+01	
<i>L. jensenii</i>	Control	6.3E+01	1
	Product	6.1E+01	
<i>S. epidermidis</i>	Control	3.9E+01	3
	Product	2.7E+02	
Overall rating:			1.3

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 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 corresponding skin microbiome (x2)	2.0
Skin-product contact direct (x2)	1.3
Overall grade	1.4

With an overall grade of 1.4 the seal „Microbiome-friendly“ is awarded according to MyMicrobiome Standard 41.10.

Place, Date: Balzers, 27th June 2024

Responsible person: Dr. Kristin Neumann

Signature:

