

What BASF is doing in Skin Microbiome



Cutting edge research

Create the latest
advances in cosmetic
active ingredients based
on live bacteria,
bacterial extracts or
active ingredients to
promote and protect the
microbiome of the skin



Scientific collaborations

Team up with other researchers to acquire complimentary expertise and access scientific expertise and equipment



Consumer trends & insight

Understand how consumers trends towards natural, organic products and active beauty are shaping the evolution of products adapted to the skin microbiome



Formulation & Innovative clinical trial

Translate research into clinically & commercially viable products: design innovative clinical trial and learn how to formulate "biotic" extracts



Launches

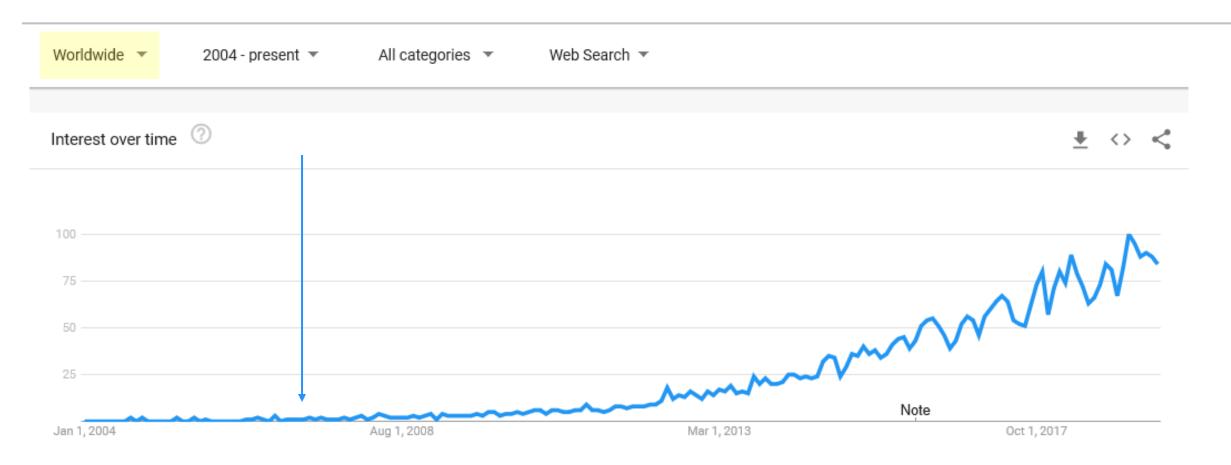
Launch new products with innovative claims in the field microbiome



Increasing buzz about microbiome



Interest for the term "Microbiome" has been increasing worldwide, as indicated by Google searches



Human microbiome project, a 5 year initiative launched in 2007 by NIH revealed details on the microbiota living in our bodies.

Sources: Google trends, 2018



Several market products contain "Microbiome" in their ingredients, but very few make related claims



Microbiome ingredients Uses Microbiome Technology that includes Clinique's patented lactobacillus extract, a soothing probiotic that helps strengthen skin's barrier and restore balance to its microbiome, calming irritation CLINIOL Clinique Redness Solutions Daily Relief Cream With Probiotic Technology (Estee Lauder)

Contains Lactobacillus Rhamnosus GG, Lactobacillus Plantarum and **Bifidobacterium Infantis**



protective bacteria straight

to the problem area and

help rebalance the system.



ZSS Skincare Clear Skin Dietary Supplement

> Dietary supplement that contains **probiotics**, marine lipids and a naturally occurring carotenoid called Zeaxanthin





Gallinée

Has an exclusive

triple biotic complex

based on pre, pro

and post-biotics to

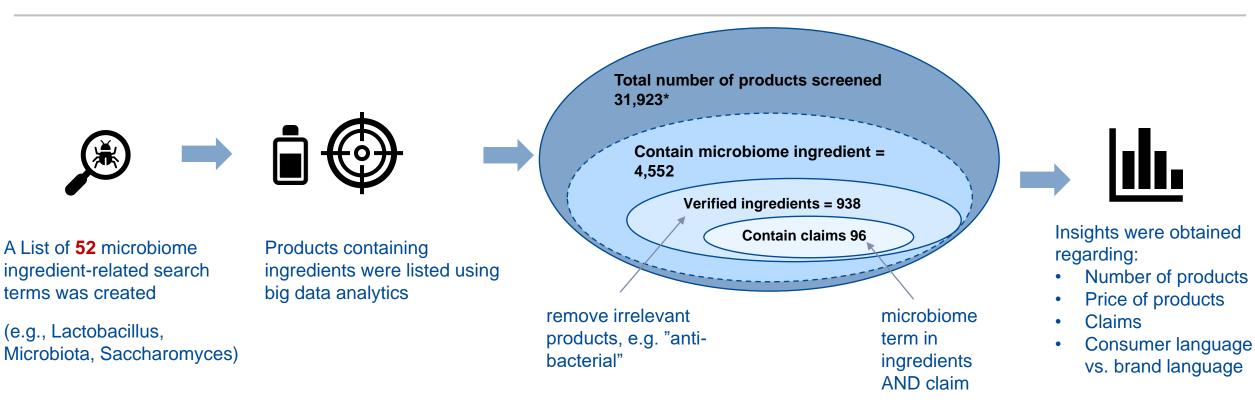
truly bring skin to life

Source: BASF big data analytics, 2017-18 Microbiome insights | BASF Personal Care

BASF big data study



BASF performed a big data study to understand the landscape of Microbiome in Skin Care products





^{*}All Personal Care Products available in e-commerce channels and launched over the past three years

Questions answered the BASF study

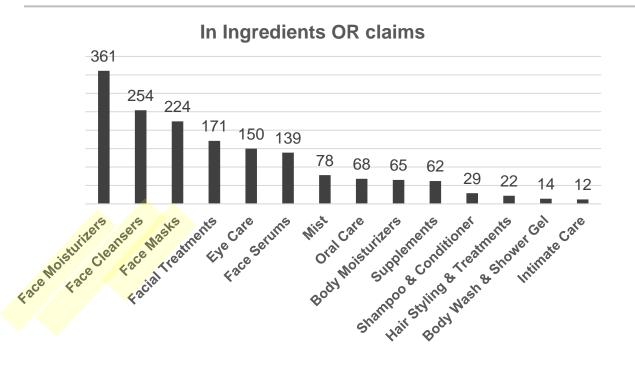
- 1. Which segments have the most microbiome containing products in the marketplace?
- 2. Do these products command a higher price?
- 3. What claims are associated with microbiome?
- 4. Is there a difference in language used by brands vs. consumers related to microbiome?

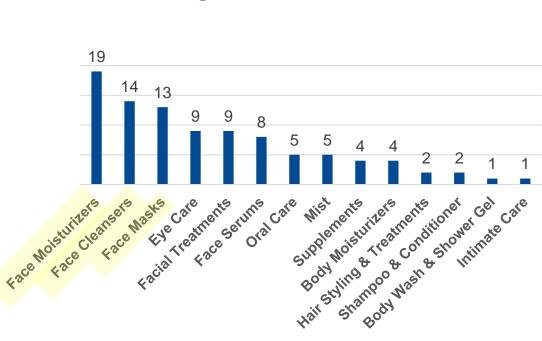


Which segments have the most products containing microbiome ingredients in the market?



Face care has the most products containing microbiome ingredients and claims





In Ingredients AND claims

Total 937 products

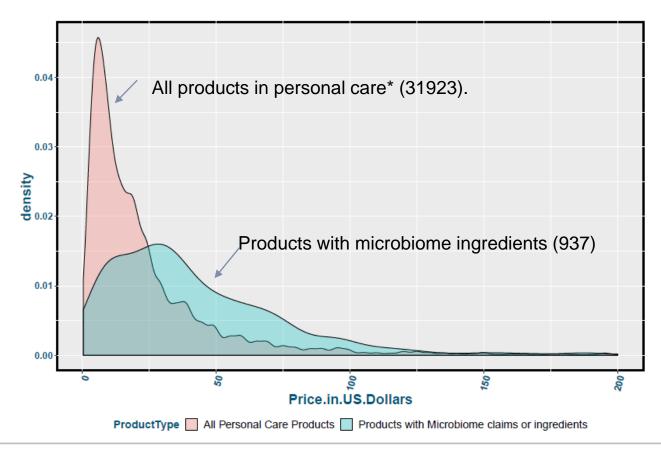
Total 96 products



Do microbiome-containing products command a higher price in the market?



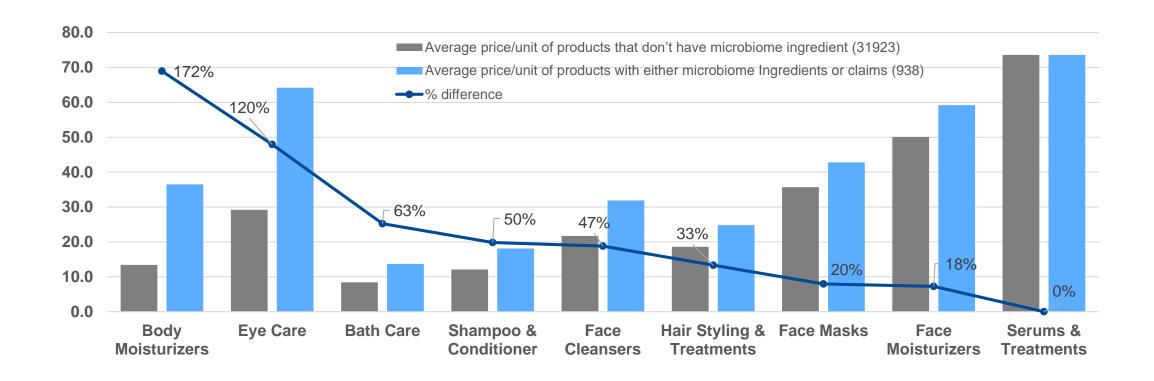
Statistical analysis reveals that products with microbiome ingredients command a higher price



^{*}All Personal Care Products available in e-commerce channels and launched over the past three years



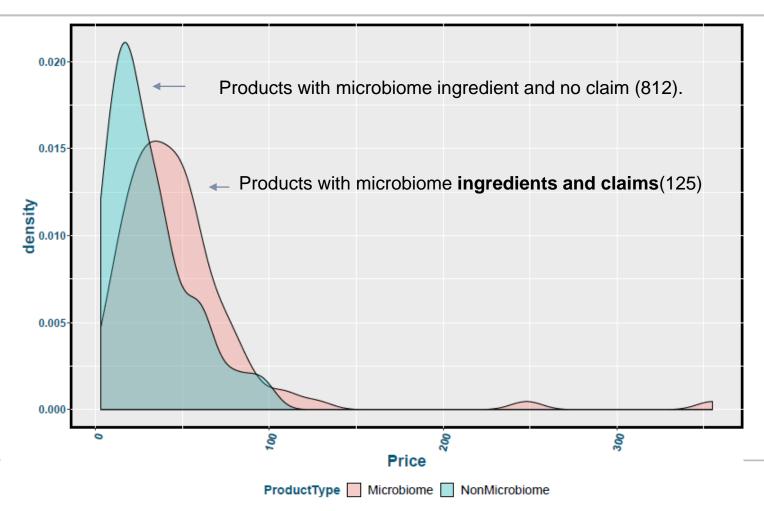
Average prices and difference by segment (USD)



All segments claim a higher average product price/unit for products with either microbiome claims or ingredients, except serums and treatments. -BASE

We create chemistry

Statistical analysis reveals that products with microbiome in claim language command an even higher price

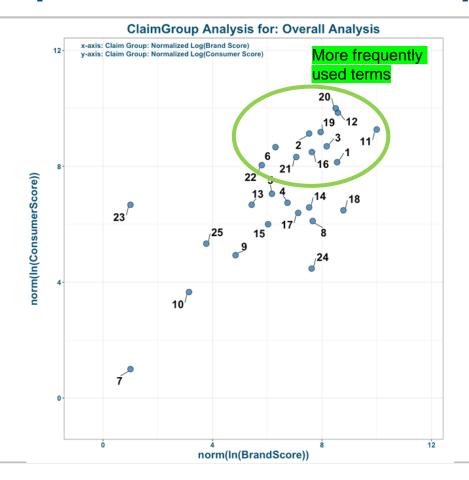




What are the top claims related to microbiome containing products?



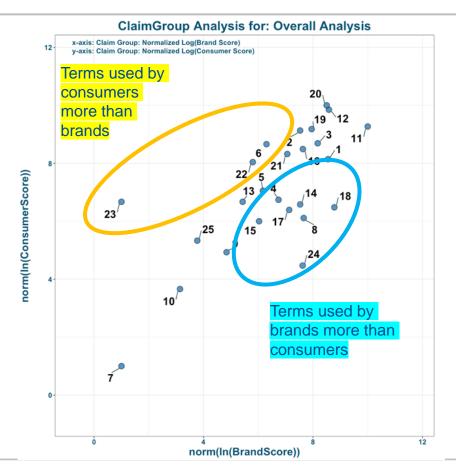
Top claims in microbiome products



ID	Top claims	ID	Top claims
1	Anti-aging	13	Oil control
2	Blemish	14	Protection
3	Brighten	15	Refined
4	Calm	16	Refresh
5	Convenient	17	Renew
<mark>6</mark>	Density	18	Safe
7	Detangle	<mark>19</mark>	Sensitivity
8	Energize	<mark>20</mark>	Smooth
9	Even tone	<mark>21</mark>	Soft
10	glittery	22	Sticky
11	Healthy	23	Sustainability
<mark>12</mark>	Hydration	24	Volume



Top claims by brands and terms used by consumers



ID	Top claims	ID	Top claims
1	Anti-aging	13	Oil control
2	Blemish	<mark>14</mark>	Protection
3	Brighten	15	Refined
4	Calm	16	Refresh
5	Convenient	<mark>17</mark>	Renew
<mark>6</mark>	Density	<mark>18</mark>	Safe
7	Detangle	19	Sensitivity
8	Energize	20	Smooth
9	Even tone	21	Soft
10	glittery	<mark>22</mark>	Sticky
11	Healthy	<mark>23</mark>	Sustainability
12	Hydration	<mark>24</mark>	Volume

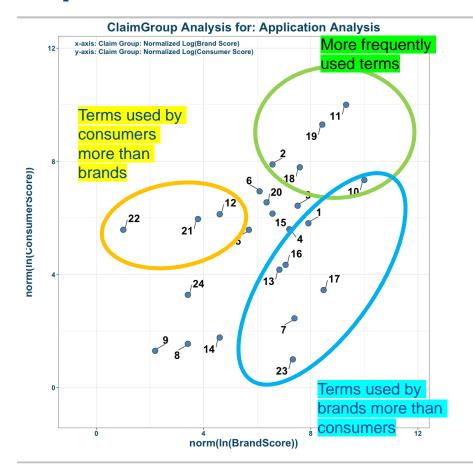
Utilization of consumer terminology can help with online discoverability and sales



Top claims by segment



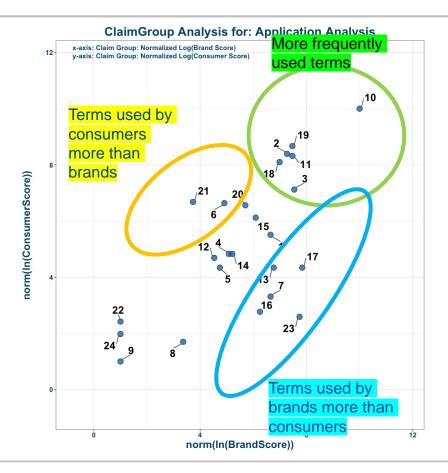
Top claims for Face Moisturizers



ID	Top claims	ID	Top claims
1	Anti-aging	13	Protection
<mark>2</mark>	Blemish	14	Refined
3	Brighten	15	Refresh
4	Calm	<mark>16</mark>	Renew
5	Convenient	17	Safe
6	Density	18	Sensitivity
7	Energize	<mark>19</mark>	Sensorial
8	Even tone	20	Smooth
9	glittery	21	Soft
10	<mark>Heal</mark> thy	22	Sticky
11	Hydration	23	Sustainability
<mark>12</mark>	Oil control	24	Volume



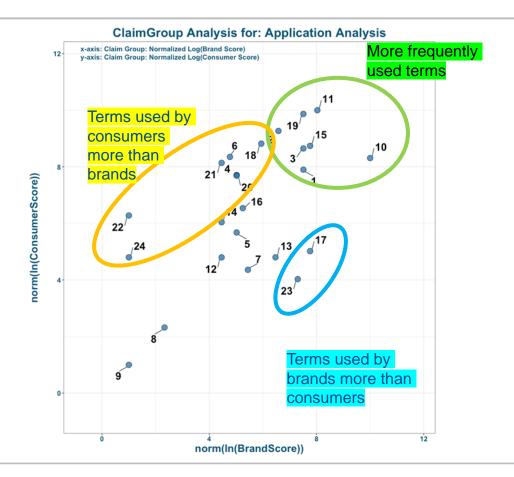
Face Cleansers



ID	Top claims	ID	Top claims
1	Anti-aging	13	Protection
<mark>2</mark>	Blemish	14	Refined
<mark>3</mark>	Brighten	15	Refresh
4	Calm	<mark>16</mark>	Renew
5	Convenient	17	Safe
<mark>6</mark>	Density	18	Sensitivity
7	Energize	<mark>19</mark>	Sensorial
8	Even tone	20	Smooth
9	glittery	<mark>21</mark>	Soft
<mark>10</mark>	Healthy	22	Sticky
11	Hydration	23	Sustainability
12	Oil control	24	Volume



Face Masks



ID	Top claims	ID	Top claims
1	Anti-aging	13	Protection
2	Blemish	14	Refined
3	Brighten	<mark>15</mark>	Refresh
4	Calm	16	Renew
5	Convenient	17	Safe
<mark>6</mark>	Density	<mark>18</mark>	Sensitivity
7	Energize	<mark>19</mark>	Sensorial
8	Even tone	<mark>20</mark>	Smooth
9	glittery	<mark>21</mark>	Soft
10	Healthy	<mark>22</mark>	Sticky
11	Hydration	23	Sustainability
12	Oil control	<mark>24</mark>	Volume



Conclusions

- 1. Products that contain microbiome related ingredients command much higher prices in personal care.
- 2. Products that contain microbiome related claims command even higher prices. It is important for brands to use microbiome related ingredients that can support consumer claims.
- 3. Top 24 microbiome related claims are similar across face care product segments.
- 4. Consumers terminology in describing these claims can be different from brands. <u>Utilization of consumer terminology can help with online discoverability and sales.</u>
- 5. BASF is pioneering in the ingredient research and also consumer language analysis to help brands succeed in this growing space.



BASF products addressing top claims

Product	Claims	Product Description related to Microbiome
Relipidium	Hydration, rebalancing microflora	A sequential ferment from yeast and lactobacillus that rebalances skin microflora resulting in strengthened skin barrier and visible improvement in the appearance of dry skin.
Oligolin	Hydration, Anti-aging, Density	Prebiotic flax oligosaccharide for skin nourishment, hydration and appearance of improved firmness.
PatcH20	Hydration, protection of microbiome	Patented combination of three bio-polysaccharides producing a molecular mesh that holds four hydrating actives.
Phytosoothe	Sensitivity, protection of microbiome, hydration	Purified natural rapeseed phytosterols for microbiotic barrier restoration
Bix'Active	Blemish, pore-refinement, oil control	A red lip tree extract from Burkina Faso for pore-refinement and perfection.
Purisoft	Protection of microbiome, antipollution	Moringa seeds protein with anti-pollution benefits
Betapur	Even tone, smaller pores, reduction in redness	Chilean wild mint (Boldo) extract that stimulates the skin's natural antimicrobial defense system without triggering any inflammatory reaction
Beta-Hydroxyde ACSD	Blemish, oil control, pore-refinement	Salicylic acid complex for Acne control for pore-refinement and oil control.
AHCare L65, AHCare G60	Anti-aging, brightening, hydration	AHA-Amino acid complexes for gentle exfoliation.



Disclaimer

"This document, or any answers or information provided herein by BASF, does not constitute a legally binding obligation of BASF. While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. It does not relieve our customers from the obligation to perform a full inspection of the products upon delivery or any other obligation. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE."



We create chemistry