Advanced Cosmetics Market Report

Q2 2021



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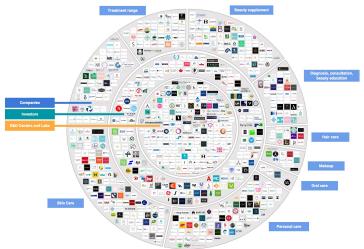
Introduction

- Advanced Cosmetics Landscape Overview 2021 suggests that the **Advanced Cosmetics market is a promising area** of the beauty industry and one of the directions of its development.
- Aging Analytics Agency assembled an unprecedented database on Advanced Analytics which contains information about 400 companies in the market.
- Advanced Cosmetics Database and Landscape **feature the wide range of public and private companies** in various subfields of the market (including manufacturing, development, and testing), allowing for comprehensive analysis of the sphere.
- Overview explores the most interesting case studies and tendencies including using the technologies in the Advanced Cosmetics sector, manufacturing of natural and microbiome-related products.
 - The study pays special attention towards cosmetics-related companies in the spheres of **Beauty Devices**, **Cosmeceuticals**, **Natural cosmetics**, **Natural Ingredients** as solutions in those areas would enable further develop products that are harmless for human organisms.

Source: Aging Analytics Agency analysis

Advanced Cosmetics Ecosystem 2021







Approach Used

Identification of relevant:

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□ Companies;

☐ Investors;

■ Laboratories;

□ Research & Development Centres;

that operate, interact with or are somehow involved in the Advanced Cosmetics industry.

Data Sources¹

Publicly Available Sources (Websites)

Industry-Specialised Databases Media Overview (Articles, Press Releases)

Industry Reports and Reviews

Applied Research & Analytics Methods					
Descriptive	Comparative	Qualitative Data	Mixed Data	Exploratory Data	Data Filtering
Analysis	Analysis	Collection	Research	Analysis	

The report provides a comprehensive overview of the Advanced Cosmetics industry, relying on various research methods and analytics techniques. It should be taken into account that the Advanced Cosmetics market was assessed based on assumptions as there is no separation of the Advanced Cosmetics market as such. Thus, it was assumed that the market includes Natural cosmetics, Cosmeceuticals, Beauty devices, Ingredients-as-a-Service and Anti-aging cosmetics markets. DKA is not responsible for the quality of the secondary data presented herein; however, we do our best to eliminate the said risks by using different analytics techniques and cross-checking data. Please note that we did not deliberately exclude certain companies from our analysis. Nor was it due to the data-filtering method used or difficulties encountered. In fact, the main reason for their non-inclusion was incomplete or missing information in available sources.

Notes: (1) Grouped by, but not limited to

Executive Summary

Microbiome as a top trigger for the Advanced Cosmetics industry

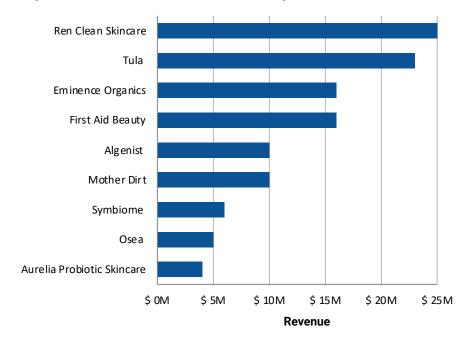
The microbiome is defined as the collective of the microbes that live inside and on the human body. Ethnic races affect the human microbiome. It is expressed through immune status, genetic characters, skin properties, foods and lifestyles. Besides them, various factors, including the use of antibiotics, cosmetics, soaps, personal care products can have an influence on the skin microbiome.

Researchers demonstrated that synthetic chemical ingredients in modern cosmetics cause damage to the skin microbiome.

Cosmetic products are not required to be sterile, but they must comply with a level of microbiological quality. These studies about the microbiome caused a significant boost in the Advanced Cosmetics market in recent years.

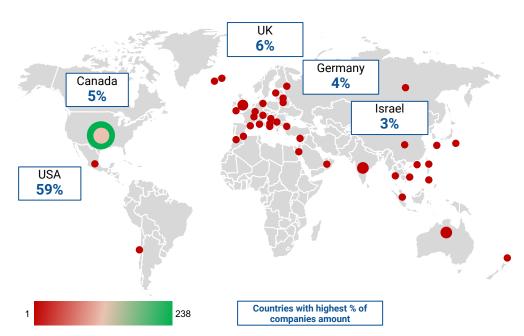
Source: MDPI website

Top microbiome-related cosmetics companies in 2020



Executive Summary

Advanced Cosmetics Companies Distribution by Countries



Source: Aging Analytics Agency analysis

Advanced Cosmetics Market Size by Sub-markets in 2020

\$160B		
\$37.6B	Natural Cosmetics	
\$56.7B	Beauty Devices	
\$44.4B	Cosmeceuticals	
\$18.3B	Anti-Ageing	
\$2.5B	Ingredients-as-a-Service	



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Executive Summary

TOP-1 Region

North America

Nº1 Publicly Traded Company

\$436B Johnson & Johnson

Leading Innovator

>400 inventions by L'Oreal

Source: Aging Analytics Agency analysis

Nº1 Investment Deal

\$750M By Coty

TOP Product Category

Skin care preparations

Nº1 Investor by Number of Investments

3,704 by European Commission

Major Trends in Advanced Cosmetics Market

Antipollution

Organic

Sun Care

CBD Usage

Al for Skin care

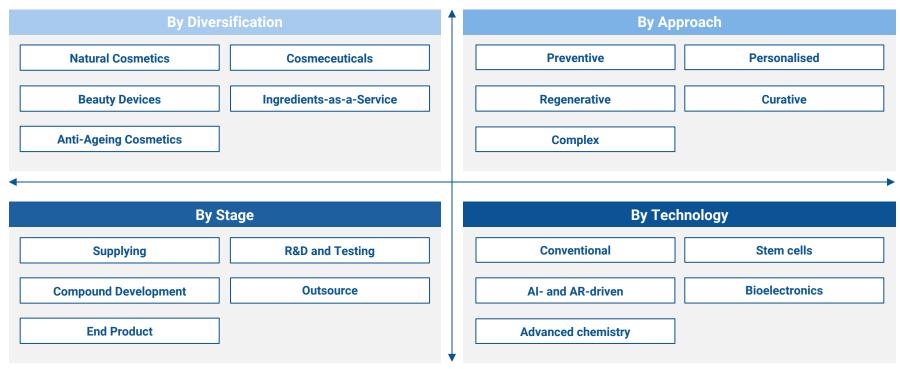
Sustainability

Antiage

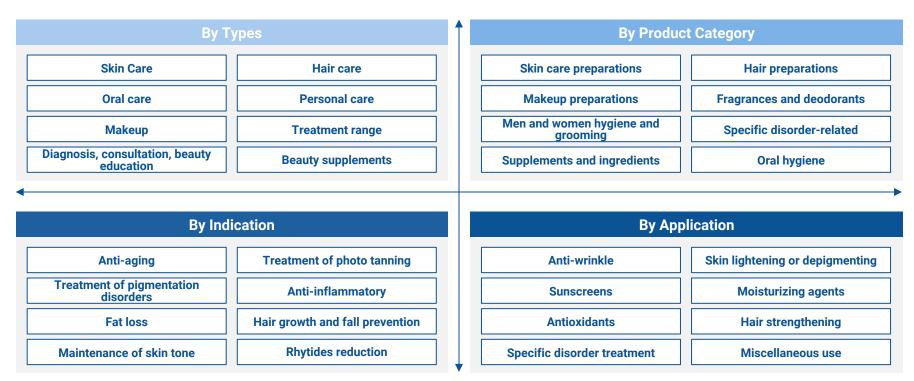
Microbiome

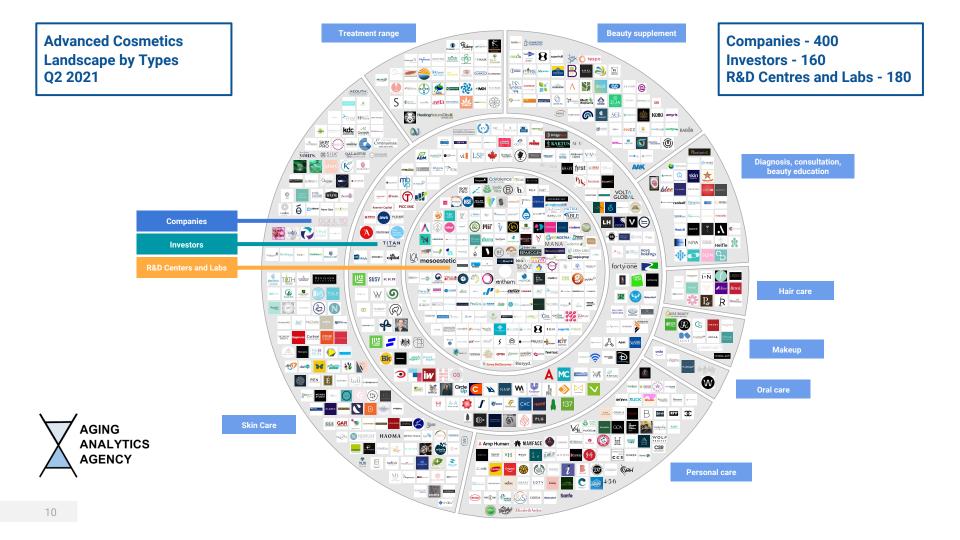


Advanced Cosmetics Market Framework



Advanced Cosmetics Landscape Framework on the Consumer Side



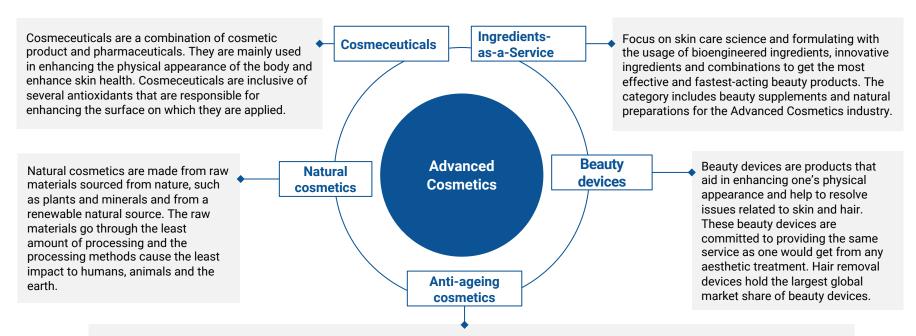


Advanced Cosmetics Market in Figures

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Advanced Cosmetics Market Composition



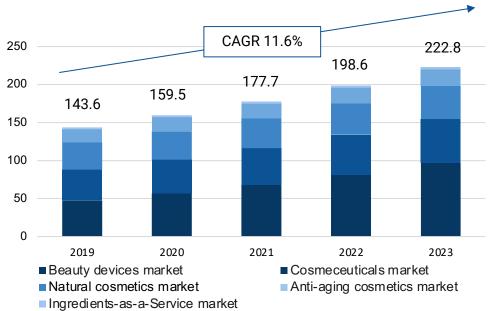
Anti-ageing cosmetics provide immense glow and moisturisation to the skin. The industry deals with a wide range of anti-ageing cosmetics which are filled with anti-oxidizing agents such as vitamins C and E that help to slow down the degenerative process of the skin.

Source: Aging Analytics Agency analysis; Fortune Business Insights; Media overview

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Global Advanced Cosmetics Market Size





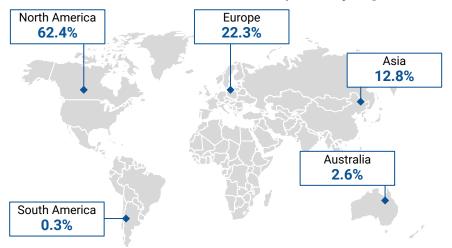
The global Advanced Cosmetics market size was calculated as the **total value of the five markets**, which accounted for \$159.5B in 2020 and is projected to grow at a CAGR of 11.6% from 2019 till 2023 to reach \$222.8B by 2023.

Such factors as increasing consumer perception regarding appearance, growing preference towards natural and organic products, rising disposable income in emerging economies, as well as the availability of scientifically advanced products are forecasted to drive the growth of the Advanced Cosmetics market

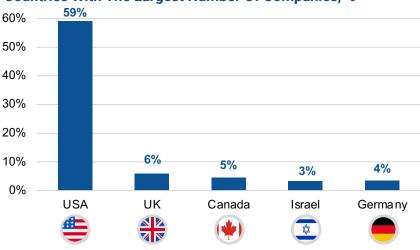
Source: Aging Analytics Agency analysis; Fortune Business Insights; Media overview

Distribution of Companies by Regions

Distribution of Advanced Cosmetics' Companies By Regions, %



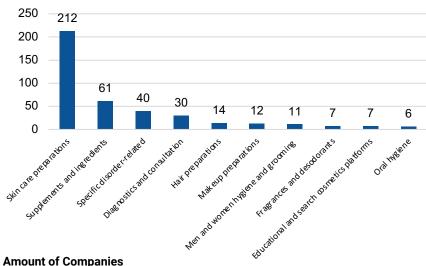
Countries With The Largest Number Of Companies, %

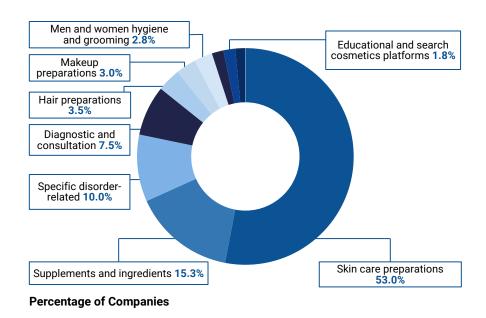


The North America region, mainly the USA, is still firmly in the lead in terms of the number of Advanced Cosmetics' companies. The amount of companies located in the USA is significantly more compared to the other countries and accounted for 62.4% of the whole range of analysed companies. Nevertheless, the European region looks also relatively promising, as the number of companies located there amounted to 22.3% of the total, with the UK being the leading country in the region — 6.1% of all analysed companies.

Companies' Distribution by Categories

Distribution of Advanced Cosmetics' Companies by Categories





Skin care preparations is the key category of the Advanced Cosmetics market which amounted to 53% of the total market. Top-5 categories in the market are skin care preparations, supplements and ingredients, specific disorder-related products, diagnostics and consultation, and hair preparations, the share of which amounted to more than 89% of the total Advanced Cosmetics market.

Source: Aging Analytics Agency analysis

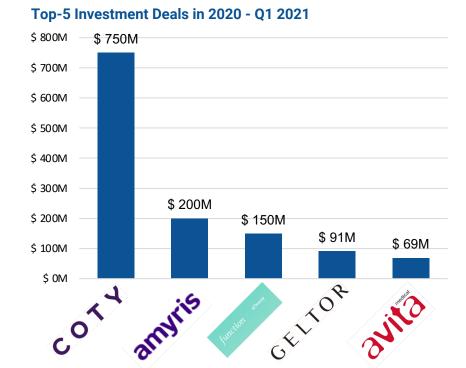
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Top-5 Investment Deals in 2020-Q1 2021

In 2020 - Q1 2021, total investments into Advanced Cosmetics companies had crossed \$12,943M, \$1,242M of which rose during the last year.

Selected significant deals:

- Coty \$750M from Kohlberg Kravis Roberts
- Amyris \$200M for general corporate purposes and to repay certain outstanding indebtedness
- Function of Beauty \$150M in Series B to continue scaling personalised beauty operation
- Geltor \$91M for the global expansion of its Ingredients-as-a-Service platform and accelerate demand from global CPG¹ companies for sustainable, functional, and 100% animal-free ingredients (Lead investor is CPT Capital)
- Avita Medical \$69M for product development pipeline, to pursue approvals of its products for additional indications and for general corporate purposes

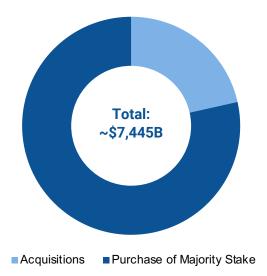


Notes: (1) Consumer Packaged Goods Source: Aging Analytics Agency analysis

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Investments Overview

Beauty deals in 2019, \$B



Selected Beauty Acquisitions in 2019



The Beauty industry has become a popular platform for many venture capital firms and angel investors around the world. Beauty startups are especially attractive for investments or M&A. In addition, major cosmetics companies were very active in closing deals. In 2019, the volume of transactions in the industry reached an all-time high — acquisitions amounted to \$1,600 Bn and purchases of majority stakes accounted for \$5,845 Bn.

Source: Aging Analytics Agency analysis; Times of India website

Natural Cosmetics Market

Skin care

leads the global natural cosmetics market

Online distribution channels

are becoming more popular

Europe

holds the largest market share

\$35.8B Global Market Size in 2019

CAGR 6.0%

The fragrance segment

is anticipated the fastest growth

Asia Pacific

has emerged as a growing industry for natural beauty products

L'Oréal, AVON, and Bioeffect

hold the dominant position in Europe

\$48.0B Global Market Size in 2025

The growing demand for beauty products, along with growing awareness of organic products, is expected to drive the growth of the natural cosmetics market. Increasing consumer awareness of the side effects of cosmetics chemistry is prompting manufacturers to introduce natural products.

Source: Statista website; Reports And Data website; Media overview

Cosmeceuticals Market



The advent of cosmeceuticals has changed the cosmetics and personal care industry. These products, unlike makeup products, could eliminate the cause of imperfections rather than just hide them. This quality has led to a huge increase in the demand for the product and has increased its share in the cosmetics and personal care industry.

Source: Statista website; Reports And Data website; Media overview

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Beauty Devices Market

At-home Devices

is the fastest growing market segment

Hair Removal Devices

is the most popular category on the market

North America

holds the largest market share

\$47.4B Global Market Size in 2019

CAGR 19.7%

AI and AR

are widely applicable in the beauty devices market

Asia Pacific

is the fastest-growing global market

The major players

are Panasonic Corporation, Lumenis Ltd., Nu Skin Enterprises Inc. **\$166B** oal Market Size

Global Market Size in 2026

Cosmetic devices are designed to address a range of problems associated with today's lifestyle. The main factor behind the growth of the beauty devices market is the rising number of various skin problems. These devices could be used for hand, face and nail care, hair care, body care, and hair removal.

Source: Statista website; Reports And Data website; Media overview

Ingredients-as-a-Service Market

Demand for health and beauty

stimulates market development

are the dominant ingredients for hair care products

Conditioning polymers

Surfactants

are the most widely used ingredients

Asia Pacific

has the highest demand for Ingredients-as-a-Service Non toxic ingredients

is the main trend on the ingredients market

The major players

of the market are Asahi Group Holdings Ltd., Pfizer Inc., Meiji Holdings Co. Ltd \$2.4B Global Market Size in 2019

/

CAGR 4.6%

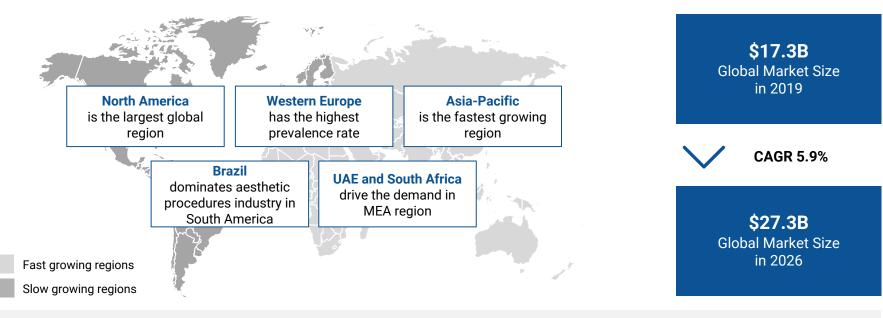
\$3.3B Global Market Size in 2026

Ingredients-as-a-Service are used to treat nutritional deficiency in human body and provide specific health and wellness benefits. Key benefits associated with consumption of beauty supplements are reduction in signs of aging and improving cardio and heart health.

Source: Statista website; Reports And Data website; Media overview

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Anti-ageing Cosmetics Market



One of the key trends in the cosmetic market now is the long-term preservation of youthfulness and longevity of the skin. As such, the anti-aging cosmetics market is growing incredibly fast and is expected to reach over \$27B by 2026. Anti-wrinkle products are the main market segment, accounting for more than half of the total market value.

Source: Statista website; Reports And Data website; Media overview

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Longevity

There are more than **1 billion** people over **60 years old** in the world. They represent not only a significant share of the global purchasing power, but also hold the largest amount of financial assets compared to other age groups.

Longevity Industry is a combination of aging, advanced preventing precision biomedicine, AgeTech, relevant parts of national healthcare budgets, and global financial industry that is related to such sub-industries.

Longevity is now regularly embraced as **a major topic** of interest for panel discussions and entire conference series by top-tier finance and business media brands including The Economist, Financial Times, and Bloomberg.

There are two opposed **MegaTrends**: population aging and advanced biomedicine. The overall market size thus can exceed **\$25 trillion**. There are at least 350 publicly traded corporations that can be considered as related to the Longevity industry. Longevity Biomedicine, FinTech, and AgeTech industries include 20000+ companies, 8000+ investors, 14 sectors, and 114 subsectors.

Considering the aspect of anti-aging, we can observe a **clear link** between the **Longevity** and **Advanced Cosmetics** industries. As the market share of the older age group is growing constantly, the Advanced Cosmetics Market proposes corresponding solutions.

Source: Longevity Investment Digest



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Connection between Advanced Cosmetics and Longevity

Many ingredients in beauty products help develop sophisticated formulations that improve quality of life in terms of disease prevention, health maintenance, beauty enhancement, and self-esteem, as well as anti-ageing effects. The beneficial effects resulting from the use of biomolecule-rich substances in the formulations of various topical products are considered beneficial ingredients for cosmetic and therapeutic applications.

Ageing is considered to be a disease to some extent, so, it is the incredibly pressing need not just for biomarkers of ageing, but the need for actionable biomarkers that could be put into practice to measure the effectiveness of healthspan-extending interventions. It is biomarkers of ageing and longevity, which can serve as a proxy measure of the effectiveness of longevity-focused therapies, that will pave the way to getting approval for drugs not on the basis of single, narrowly-classified diseases, but on their effects on ageing itself, and will lay the necessary regulatory infrastructure needed for the rapid industrialisation of longevity to scale, as well as to allow governments to measure the effectiveness of their efforts to increase national Healthy Longevity, a goal that a number of longevity-progressive governments are now keenly moving forward towards. More information:

https://www.dkv.global/biomarkers-of-longevity

AI-Driven Development of

Source: Aging Analytics Agency analysis; DKV Global website

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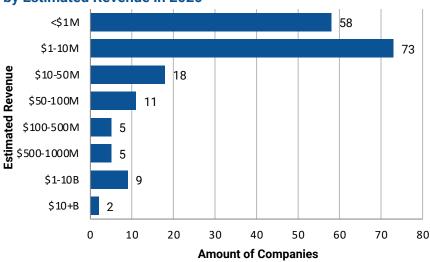
Leading Companies in Advanced Cosmetics Market

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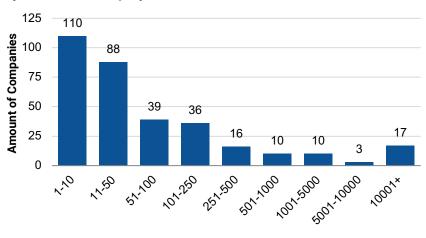


Diversification of Companies

Distribution of Advanced Cosmetics' Companies by Estimated Revenue in 2020



Distribution of Advanced Cosmetics' Companies by Number of Employees in 2020



Number of Employees

The majority of Advanced Cosmetics companies generated revenue up to \$10M in 2020. 14.5% of all companies showed revenue in the amount of < \$1M and 18.3% - in the range of \$1-10M while only 2.7% of Advanced Cosmetics companies achieved revenue more than \$1B. The half of companies had up to 50 employees in their staff in 2020.

Top Advanced Cosmetics Companies

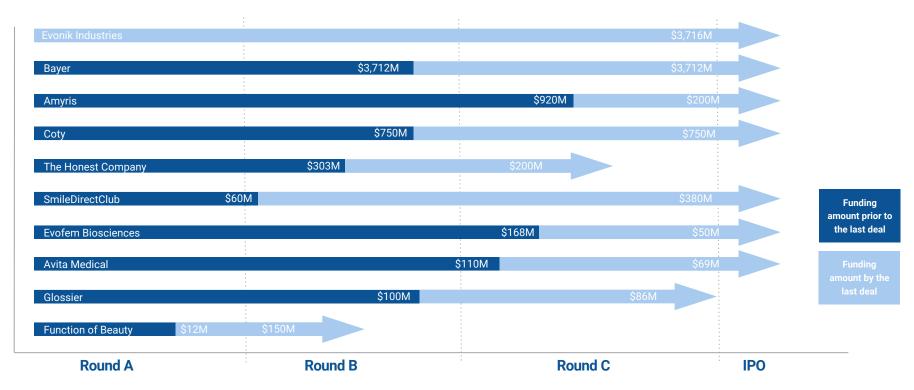






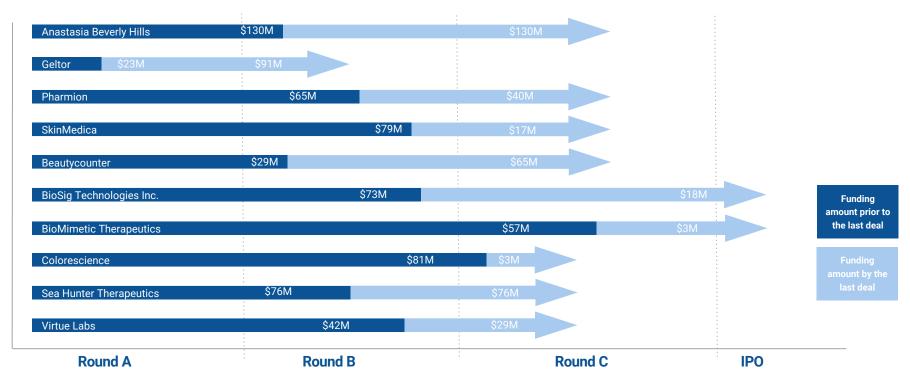


Top Companies by Investments and Investment Stage





Top Companies by Investments and Investment Stage





Top Advanced Cosmetics Companies by Founding Round and Categories



By Types

Al in Advanced Cosmetics Companies



Source: Aging Analytics Agency analysis; Companies' websites; Media overview

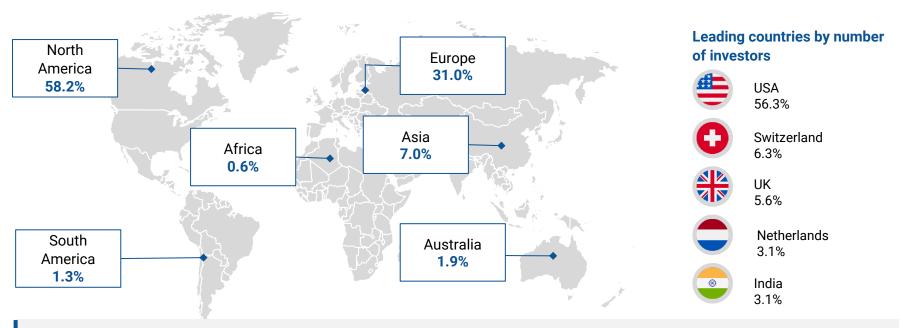


Leading Investors in Advanced Cosmetics Market

Q2 2021



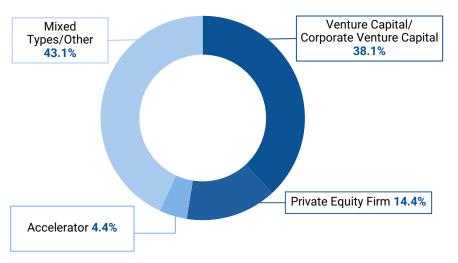
Distribution of Investors in Advanced Cosmetics Market by Regions



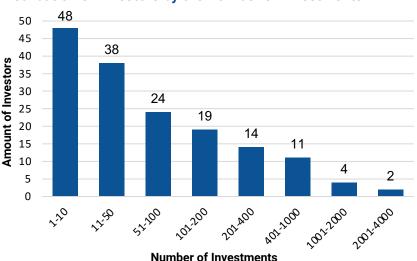
Investors in Advanced Cosmetics market are mainly located in the North America (58.2%), followed by Europe (31.0%) and Asia (7.0%). As of now, substantial investment in online beauty e-Commerce platforms and subscription services is observed. Moreover, natural (organic) products are also getting a lot of attention from investors.

Distribution of Investors

Investors Distribution by Types



Distribution of Investors by the Number of Investments



Venture capital (VC) firms account for 38.1% of all investors. Before technology disrupted the Advanced Cosmetics market, VC investors were not fully interested in the market as the promotion of new brands and products' benefits was pretty stagnant. With the rise of AI and AR technologies in the beauty industry, VC investors are expected to pay special attention to Advanced Cosmetics market potential.

Source: Aging Analytics Agency analysis; Nivea Accelerator website

Leading Investors by Number of Investments



The leading company in terms of investments among analysed ones is EASME (EU Executive Agency for SMEs) based in Belgium, which has been set up by the European Commission to manage on its behalf several EU programmes.

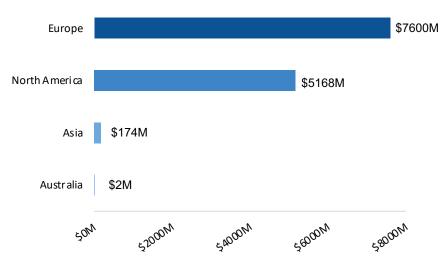
Comparison of Advanced Cosmetics Market Investment Funds



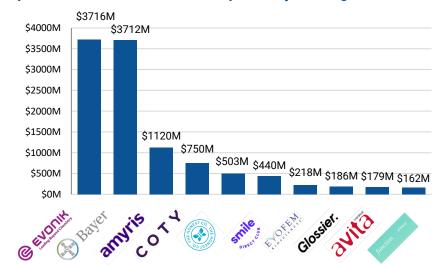
Investor Type

Funding by Regions and Leading Advanced Cosmetics' Companies

Funding be Regions



Top-10 Advanced Cosmetics' Companies by Funding



The largest region by funding is Europe with \$7.6B or 58.7% of the market in terms of the total funding. The leading company by funding is Evonik Industries with more than \$3.7B and almost the same amount has Bayer. Both companies are based in Germany. Amyris, the US based company, takes the third place with \$1.1B funding.

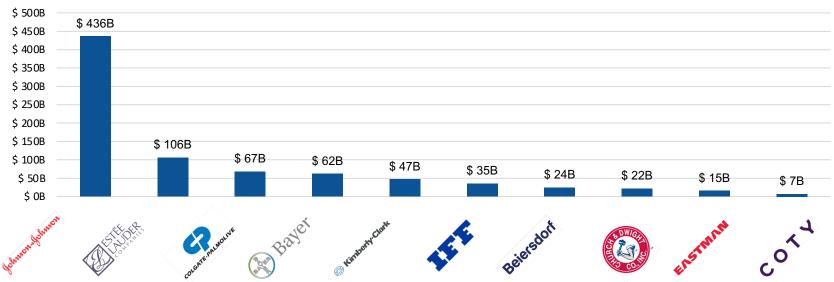
Top Publicly Traded Companies

Q2 2021



Top-10 Publicly Traded Advanced Cosmetics' Companies by Market Capitalisation

Top-10 Advanced Cosmetics Companies by Market Capitalisation as of March 2021



Johnson & Johnson is the leader of the ranking by market capitalisation which amounted to \$436B in March 2021. The company has subsidiaries operating in the Advanced Cosmetics industry, one of which is Neutrogena and Clean & Clear. The second and third largest publicly traded companies are Estee Lauder Companies and Colgate Palmolive with total capitalisation amount of \$106B and \$67B respectively.

Top-20 Publicly Traded Advanced Cosmetics' Companies by Stock Exchanges' Distribution

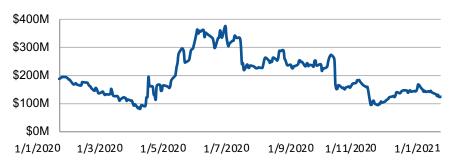
Pink market (OTCQB) **NASDAQ** NYSE **US-Based US-Based** Estee Lauder Companies (EL) Amyris (AMRS) Zivo Bioscience (ZIVO) Coty (COTY) Market Cap: \$105.6B Market Cap: \$5.1B Market Cap: \$62M Market Cap: \$6.8B Nu Skin Enterprises (NUS) SmileDirectClub (SDC) Charlotte's Web (CWBHF) Johnson & Johnson(JNJ) Market Cap: \$2.7B Market Cap: \$3.9B Market Cap: \$652M Market Cap: \$436B Canada-Based Evofem Biosciences (EVFM) **Germany-Based** Market Cap: \$144M Colgate Palmolive (CL) Eastman Chemical Market Cap: \$67.3B Beiersdorf (BDRFF) BioSig Technologies BDF 0000 Company(EMN) Market Cap: \$24B Inc.(BSGM) Market Cap: \$15.2B Kimberly-Clark Corporation Market Cap: \$131M (KMB) Canada-Based Market Cap: \$46.8B **Germany-Based Germany (Xetra)** International Flavors & Sirona Biochem (SRBCF) Biofrontera (BFRA) Fragrances (IFF) Market Cap: \$174M Market Cap: \$69M Market Cap: \$35.1B **Germany-Based** China-Based Church & Dwight Co (CHD) Bayer (BAYN) Market Cap: \$21.8B Market Cap: \$61.6B Evonik Industries (EVK) Market Cap: \$42M

Advanced Cosmetics IPOs Landscape in Recent 3 Years

Due to the crisis, none of the companies have announced the closing of their IPOs. However, the number of companies that claim to issue their IPOs, has grown for the last three years. That is an indication of steady growth of the market, even though all corporations have financial problems due to a pandemic.

Most firms aimed at IPOs took place in the USA in the second half of 2020. The key stakeholders for futures IPO issuer are underwriters and institutional investors, and because of the capital they can contribute to the issuer, yet little is known about how they evaluate new issuers. Thus it is critically important factor in further analysis of these firms.

Capitalisation change in 2020, BSGM



Name	Country	Funding Amount. \$M	Investments in 2020 (\$M)	IPO Date	Capitalisation (\$M)	ROA	ROE	Profit margin	Operating margin	EV/EBITDA	Net income (\$)
BioSig Technologies	USA	91.0	38.3	21.09.2018	142	122%	(-155.0%)	0%	0%	-1.8	(-52,218)
Virtue Labs	USA	70.1	28.6	31.05.2018	0	N/A	N/A	N/A	N/A	N/A	N/A
Phynova Group	UK	12.0	12.0	12.05.2020	0	N/A	N/A	N/A	N/A	N/A	N/A
OnlineDoctor	Switzerland	9.12	5.8	24.01.2018	0	N/A	N/A	N/A	N/A	N/A	N/A
VOLO Beauty	USA	5.0	5.0	30.01.2020	0	N/A	N/A	N/A	N/A	N/A	N/A

Advanced Cosmetics Publicly Traded Companies

Cumulative capitalisation dynamics, 2020-Q12021



Due to the crisis, 41 publicly traded companies experienced a decline in their operations, with cumulative capitalisation of \$210B or (-25.14%) growth.

By market capitalisation, the largest companies are Johnson & Johnson, Estee Lauder Companies, Colgate Palmolive, Bayer, and Kimberly-Clark Corporation.

The chart highly correlates to changes in capitalisation of the five largest companies, which are more than 80% of the whole represented market. Also, companies such as Johnson & Johnson affects the dynamics even though its changes caused unrelated activities of the company, such as manufacturing the vaccine.

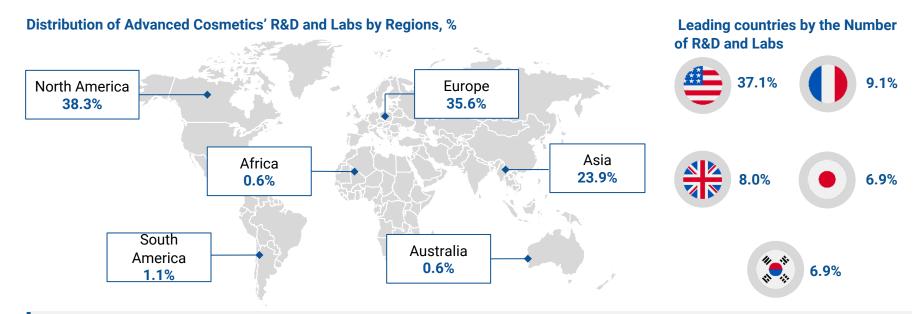


Leading Laboratories and R&D Centres

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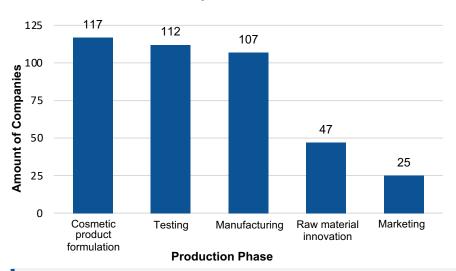
Distribution of R&D and Laboratories in Advanced Cosmetics Market by Regions



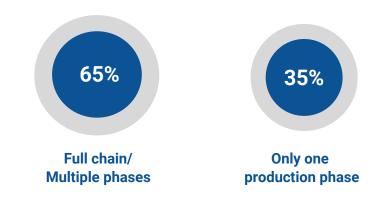
Investors in the Advanced Cosmetics market are mainly located in the North America (58.2%), followed by Europe (31.0%) and Asia (7.0%). As of now, substantial investment in online beauty eCommerce platforms and subscription services is observed. Moreover, natural (organic) products are also getting a lot of attention from investors.

Distribution of R&D and Laboratories by Production Phases

Laboratories and R&D Participation at Production Phases 1



Share of Laboratories and R&D Centres Involved in Either One or Multiple Production Phase

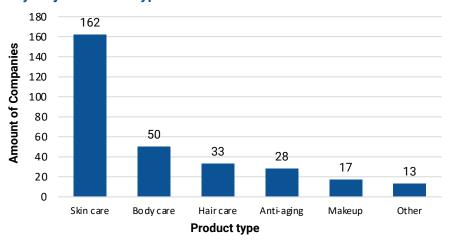


With the growth of the industry, companies began to offer an increasing range of services to their customers. Laboratories or R&D centres could provide not only new product development, testing and support when obtaining the appropriate certifications, but also services for the manufacture of cosmetics, as well as advice on further distribution. In general, more than 65% of companies provide a full range of services.

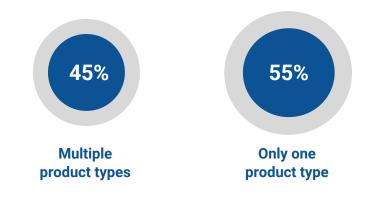
Notes: (1) Laboratories and R&D centres can belong to multiple production phases Source: Aging Analytics Agency analysis

Distribution of R&D and Laboratories by Major Product Types

Distribution of Laboratories and R&D Centres by Major Product Types¹



Share of Laboratories and R&D Working Over Either One or Multiple Product Types



As for the product types specialisation, laboratories or R&D centres are demonstrating almost equal distribution among multiple product types and the only one product type focus, nearly 45% and 55% respectively. Among other, the skin care products development services are provided by 162 companies.

Notes: (1) Laboratories and R&D centres can belong to multiple product types Source: Aging Analytics Agency analysis

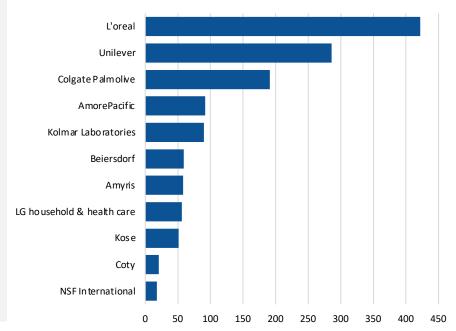
Laboratories and R&D Centres Landscape

R&D and Labs is a complex branch, which is based on the principles of strategic decisions. Firstly, it's the location of R&D and Labs facilities. The company has to fulfill the wish of all sectors of the world, therefore, they need to do research for all types of racial characteristics. **By using collaborations, companies have access to new and complementary knowledge and technologies**; they can be faster at solving complex problems and can spread the cost of R&D and Labs among different parties.

Another location advantage is the role of the government in creating incentives for R&D and Labs, as well as improving innovation infrastructure. In our report, we want to denote the tendency in natural cosmetics, suitable alternatives to animal testing, developing anti-aging products, formulation of skin-repairing products. Also more and more firms try to achieve their goals through environmental protection and energy efficiency.

The main characteristic in the R&D and Labs branch is location facilities and **L'Oréal became a leader** in this field thanks to the amount of their Science Innovation Centers. They have 58 Scientific and technical-regulatory Departments: 27 in Europe, 13 in Asia, 12 in the Americas, 6 in Africa & Middle East.

Leading Innovators by Number of Inventions



Source: Aging Analytics Agency analysis

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Funding of Laboratories and R&D Centres

In the cosmetics industry, R&D and Labs take a special place. However, a brand with the highest spending on development and testing cosmetics could fail. Consumers do not need to get new formulas in each tube, but they expect to get a stable great effect after daily hygienic procedures.

For example, P&G does not spend on R&D and Labs at all. P&G already has excellent formulas that would be difficult to improve upon. Another example is L'Oréal. The company spends \$1.1B to tailor its products to match the needs of local consumers.

The Main Categories of Companies Expenditure

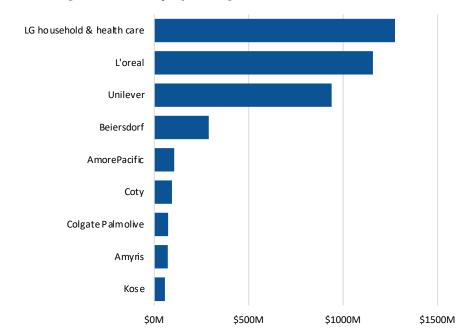
Basic research

Product development

Technology development

Process and product optimisation

Leading Innovators by Spending on R&D and Labs



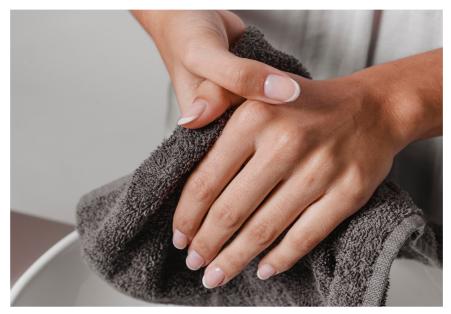


Market Trends & Developments



Negative Impact of 'Classic' Skin Care Products

Skin microbiome is the collection of microbes (bacteria, fungi, viruses, etc.) that live on human cells.



Source: Access Medicine website; Aura Herbal website; FDA website

Human skin microbiome is exposed to more than 100 different chemicals on average in the form of makeup and skincare products.

Dangerous chemicals like **sodium sulphates**, **phthalates**, **parabens**, **triclosan** and **various reactive acids** present in the majority of 'classic' cosmetic products are absorbed by the skin into the bloodstream and cause numerous long-term side effects, some of which have serious consequences for the user's overall health.

Main Negative Effects of Using 'Classic' Skin Care Products:

- Cancer Risk. A majority of chemical cosmetics available in the market today contain toxic ingredients that can cause breast, skin or blood cancers.
- Breathing Disorders. Chemical cosmetics can affect the physical appearance, cause painful allergies, causing serious breathing disorders.
- Damage of Reproductive Systems. The allergy-causing parabens present in cosmetics are toxic to the reproductive cells.
- Disruption of Thyroid Systems. Damaging chemicals in cosmetics over a long period of time, can wreak havoc with the endocrine system, particularly the thyroid gland.
- Allergic Reactions. A large percentage of health problems from cosmetics involve allergies.
- Itching and Skin Disorders. A number of oil-based skin foundations clog pores
 on the facial skin, leading to acne outbreaks and skin disorders.
- Skin Discoloration. A number of cosmetics can have bleaching or darkening effects on the skin, especially if the products are of inferior quality.



Microbiome-related Products as a Trend on Advanced Cosmetics Market

Categorisation of Microbiome-related Products



Prebiotics

promote the growth of beneficial microorganisms



Cases of Microbiome-related Products Development and Introduction

In 2020, L'Oreal announced a partnership with microbial genomics company uBiome to further its research into the skin microbiome.



Probiotics

contain live beneficial microorganisms



Algenist's Alive Prebiotic Moisturizer with SPF 15 balances the skin microbiome while protecting it from sun exposure. The product's prebiotic is derived from algae, which is combined with a probiotic, zinc oxide and a regenerative microalgae compound.



gallinée

Gallinee distributes a cream that contains what the company describes as "deactivated bacteria along with prebiotic fibers and sugars to support the growth of good bacteria, and lactic acid to optimize skin pH.



Postbiotics

contain non-viable bacteria or metabolic by-products

AOBIOME

AOBiome focuses on transforming human health through products that restore ammonia-oxidizing bacteria (AOB) develops a novel class of therapeutics to improve skin health, hypertension, and other systemic conditions.

The goal of microbiome-related products is to protect the skin, not affect it. Cosmetics companies develop products that are based on prebiotics, probiotics and postbiotics.

Source: Aura Herbal website; L'oreal website; Algenist website' Gallinee website; AOBiome website

Key Market Trends

ANTIAGE

Women aged 65 and older will be the fastest-growing female age segment through 2025. Anti-Ageing cosmetics aims to prevent signs of skin ageing and prolong youth appearance.

MICROBIOME

Aggressive chemical elements in soap, water, and the environment can damage a healthy skin ecosystem. Studying the skin microbiome and using the "right" bacteria and probiotics in skin care is another wide trend.

ANTIPOLLUTION

Pollution is one of major factors of premature ageing of the skin. With this view more skincare labels are developing solutions to resist these agents.

CBD USAGE

Cannabinoids have shown great anti-inflammatory and antioxidant effects on the skin. In this regard, the demand for CBD cosmetics is augmenting. Google Trends shows an increase of +295% in search interest for "CBD skincare" at the beginning of 2020.

SUSTAINABILITY

The implementation of environmentally friendly technologies in the production of cosmetics, cruelty free products testing, usage of packaging from organic, biodegradable materials.

AI FOR SKINCARE

The application of Artificial Intelligence for skin analysis, existing issues identification and the selection of personalised skincare routine.

ORGANIC

The trend towards the use of organic ingredients in cosmetics has persisted in recent years, heating the top. Manufacturers offer products using herbs, essences, organic oils.

SUN CARE

Consumers become more educated about sun damage – indicating potential for growth within the subcategories of sun protection.

Source: Common Thread Collective website, Media overview



Cases of Key Market Trends Usage

ANTIAGE



The Lubrizol Life Science Beauty introduced their new development – Argireline® Amplified peptide. New Argireline® Amplified peptide is a multi-functional ingredient product with an intense anti-aging power that visibly transforms tired, dull, aging skin into a more healthy, glowing and youthful complexion.

MICROBIOME



In 2015, MIT scientists discovered a groundbreaking bacteria – AOB, with the ability to balance a diverse set of ecosystems, including the skin ecosystem. The **Mother Dirt** startup developed a product that preserves AOB in its live state and actively delivers them to the skin to restore the skin microbiome.

ANTIPOLLUTION



Unilever has filed a patent on the use of resin-based film formers to prevent pollution-triggered skin damage. The air pollution, a heterogeneous of chemicals and solid particles is a major concern for skin structure and health. Unilever outlined a method involving fluorescence-based assays.

CBD USAGE



Jinjoo Labs, Inc. has announced its new skin care line that combines Korean skin care ingredients and cosmetics technology with cannabidiol. In addition to internal testing at Korea Particle Technology and Jinjoo Labs, the new products were tested at the Miami Skin Institute in Florida.

Source: Companies websites, Media overview



Cases of Key Market Trends Usage

SUSTAINABILITY



Liz Earle Beauty Co. actively incorporates the sustainability trend. The company only uses responsibly sourced ingredients, with a focus on "naturally active" ingredients that have been naturally derived from plant, marine or mineral sources; using recyclable packaging; supporting the local community.

AI FOR SKINCARE



Haut.AI provides skincare brands with a B2B SaaS tool for AI analysis of their customers' skin. The tool automates the collection of high-quality skin data and helps skincare brands build interactive product recommendations on e-commerce platforms. In addition, the specific clinical software developed for R&D use.

ORGANIC



True Botanicals has won a number of awards for its sustainable and safe skincare. The company uses organic botanical extracts in products development, and the partnership with Carnegie Mellon and Cornell universities ensures its effectiveness. Each formula is MADE SAFE® certified.

SUN CARE



The latest launch from **Kylie Skin** is a Broad Spectrum SPF 40 Face Sunscreen – a unique product, due to its crystal-clear formula with Shea Butter, Vitamins A, C, and E. A broad-spectrum sunscreen blocks both UVA rays, which cause aging, and UVB rays, which cause burning.

Source: Companies websites, Media overview

Latest Initiatives and Programmes

ACCELERATORS / INCUBATORS

FORMA is an incubator, accelerator, and curator of young beauty brands. Supporting startups' founders by providing the resources, consultations, and know-how

Big Incubator Group is seeking for brands and co founders with expertise in skin, fragrance, color, hair and home.

HatchBeauty Brands promotes innovative ideas most of which are rooted in green, clean or natural. Focused on hair, skin, nail, body, fragrance, color cosmetics, ingestible blends, teas and tinctures.

CORPORATE INITIATIVES

Open Innovation Program by L'Oréal is supporting startups that can transform the way Beauty brands interact with consumers.

NX | NIVEA Beauty Accelerator is the 1st global beauty accelerator in South Korea. Maintains customised collaboration and strategic partnership with startups.

La Maison des Startups by LVMH initiatives innovators in fragrances, makeup, skincare and selective retailing.

Programmes and initiatives allow the industry to develop, absorb new technologies from other areas, and involve young teams in the development of innovative cosmetics. Currently, there are several ongoing trends that increase in particular variable entrepreneurial and innovative programs initiation. The demand for a local manufacturer, clean, vegan and cruelty-free products, unusual, and revolutionary approaches.

Source: Companies websites, Media overview

Advanced Cosmetics Using Technologies

PERSONALISATION

Perso is a small household appliance that uses artificial intelligence to custom mix cosmetics. The Perso-App uses the ModiFace technology for skin analyses. Then the device creates the right treatment using a cartridge system.

Artificial Intelligence

Swedish beauty company **FOREO** utilises AI for its LUNA fofo, a facial massage and cleansing device that contains sensors which analyse the user's skin to generate a skincare routine unique to the individual.

SMART MIRRORS

Wella Professionals Smart Mirror by **Coty** – the mirror that offers a live AR hair colour try on, a 360° video capture of the hair at every angle, and uses facial recognition technology to retrieve previous styles "tried on' by the user.

Source: Media overview

AR

In 2020, **L'Oreal's** launched a new virtual tool – "Signature Faces" the virtual makeup line. It allows consumers to "wear" make-up online with 10 different AR filters on live video platforms including Zoom, Google Duo, Snapchat, and Instagram.

3D PRINTING

The **Mink** printer uses the newest 3D printer for production of wearable make-up. With the mobile app assistance it can transform any image into a "makeup sheet".

DNA BASED

EpigenCare's SKINTELLI are proposing to consumers to test the current quality of their skin before generating a personalised skincare routine based on genetic activity.



Artificial Intelligence in Cosmetics

Artificial Intelligence (AI) is helping the cosmetic industry to cater personalised cosmetic products to potential customers. All analyses the data behind shopping habits that can help to create virtual retail experiences. Moreover, based upon similar products shoppers have viewed, liked or purchased cosmetic companies can offer customised recommendations to consumers.

Selected Examples:

Curology

Using machine learning, Curology's app provides customised online acne care. Customers send a selfie, fill out questionnaires and get matched with a professional who compounds a custom formula that targets their individual skin care needs.



Yours has Al-based personalised skin care products such as night creams, moisturizers and serums. According to its founder Navneet Kaur, when the company creates a regimen for its users, it takes into account the age, skin type and habits such as sleeping, smoking and water consumption, because lifestyle and environment, do impact skin health.



Revieve's Digital Beauty Advisor provides skin care recommendations based on an Alpowered personalisation search engine which analyses nearly 68 factors such as redness, eye bags and wrinkles via selfie analysis. Beauty retailer Nordic Feel relies on it to provide a personalized experience for its online shoppers.

The expected growth of the eCommerce industry and technological advancement will drive a lucrative increase in Artificial Intelligence in the beauty and cosmetic market. Artificial Intelligence comprises a number of applications including relevant recommendations, facial recognition cosmetics, personalised cosmetic by using questionnaire and facial recognition. For instance, L'Oreal has developed an Al-based skin tracker sensor that can recommend skin needs and provide recommendations for its customers.

Source: Happi website; Medgadget website; Media overview

Usage of Stem Cells

Stems cells are derived from plants (or occasionally animals), it works similarly to human stem cells and may offer anti-ageing benefits for the skin, fight wrinkles, and improve skin turnover. Plant stem cells include skin-beneficial ingredients such as antioxidant vitamin C, collagen-building peptides and nourishing plant oils.

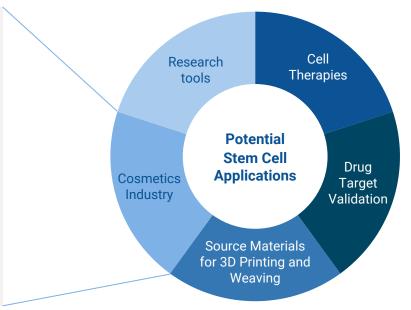
Usage of Stem Cells in Cosmetics

Pros:

- · Help skin appear from taut and firm
- Reduce the appearance of wrinkles, dark spots and large pores
- · Helps promote the look of even-toned skin

Cons:

- Difficulty of obtaining stem cells and long period of growth required before use
- Prohibitive costs for many patients
- Ethical issues regarding the creation of stem cells in labs



Source: Media overview

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Latest Advanced Cosmetics Brands' Collaborations

Collaboration and partnership is an outstanding opportunity for beauty brands to develop new products, incorporate new technologies, enhance cooperation within the industry and scale up eCommerce capabilities.



L'ORÉAL + STATION F > The aim of cooperation is to accelerate 20 high potential early stage startups in the beauty sphere.



DECORTÉ + PERFECT > Decorté, a leader in Japanese beauty and a pioneer in cutting edge dermatological research and skincare technology, is launching Perfect Corp.'s new Al skincare diagnostic technology.



The goal of the collaboration is to introduce sustainable ethanol made from captured carbon emissions into its fragrance products.

Source: L'Oreal website, Decorte website, Media overview

Conclusions and Projections



Key Takeaways

State of Advanced Cosmetics

Trends in Advanced Cosmetics

The market is developing very fast, growing at a CAGR of 12% from 2019 till 2023

>400 companies, 170 investors, and 182 labs and R&D centers

Women aged 65+ become the fastest growing female segment Increase in the usage of cannabinoids in cosmetics' production

World leaders in the cosmetics industry build partnerships with each other

Johnson & Johnson is the leading publicly traded advanced cosmetics' company Growing popularity of cosmetics that do not cause damage to the skin microbiome

Usage of natural and organic ingredients in cosmetics

North America is the largest market of Advanced Cosmetics EASME is the leading company in terms of investments

Development of solutions to resist pollution

Application of AI for comprehensive skin analysis

Conclusions and Future Projections

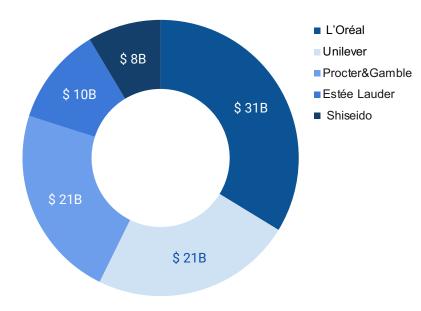
In recent years, the cosmetics industry has amplified with enormous growth potential. In this field, technologies are actively imposing. In the report, spheres such as manufacturing of natural and microbiome-related products, antipollution, anti-ageing, CBD usage, AI for skincare were highlighted.

The main problem of "classical" cosmetics is an almost complete lack of microbiological quality. Therefore microbiome was damaged by daily hygienic procedures. New innovation firms try to fix disadvantage in the beauty branch. The other significant direction in innovation cosmetics is natural cosmetics. Natural products save the microbiome that helps our skin respond to environmental factors.

The same cosmetics may have different effects on the skin depending on the skin characteristics of the individual. For these reasons, **cosmetics** belong to the high-risk product category, nevertheless, sales of the global beauty market reached \$265B in 2020. Asian cosmetic chemicals market to represent the fastest expanding region with 7.6% CAGR forecast during 2013 to 2018. Arabia, closely followed by Iran and the UAE, are the top 3 countries in terms of cosmetics consumption in the middle east.

The most preferred cosmetics lines are the colour and makeup segment with values slightly more than 18% of the total personal care market. The premium segment represents 28% of total sales worldwide.

Five Main Cosmetic Companies Worldwide by Sales in 2020, \$M





Conclusions and Future Projections

L'Oréal will be still occupying the biggest market share, with an approximately \$30B annual revenue. Asia and Oceania will become the biggest consumers of skincare products globally. Continuation of the current trend growth. As a plus, all beauty packaging will be biodegradable.

Based on the personal skin swab, brands will produce a suitable for a unique skin ecosystem skin care.



The Global Advanced Cosmetics market size will reach \$223B



The Global k-beauty market will expand for 11.3%



The Global natural cosmetics market will augment of \$20B



The majority of beauty products will be bacterially bespoke

- Wide usage of devices for skin scan
- Vitamin-D-promoting sunscreen

- Downloadable personalised skincare and makeup
- New non-invasive methods of wrinkles freeze
- · Laser usage for face lift
- Innovative topical solution for hormonal acne
- · Customised foundation shade
- Solution for a hair aging

Source: Aging Analytics Agency analysis; Media overview

Trends and Predictions for 2021

Design of Nano-ingredients

Nanoparticles and liposomes acting as vehicles for delivery of bioactive ingredients.

Zero Waste and Waterless Beauty

The cosmetic industry needs to improve and do better in order to achieve zero waste goal by making recyclable every component of a cosmetic product and reducing the quantity of water in final product formulations.

Living Cells

Living cells are being researched as ingredients to increase the bioactive effect, including stem cells and algae.

Virtual Reality and IoT

Technologies based on virtual reality and Internet of Things (IoT) are expected to have more and more impact on the cosmetic industry due to the proliferation of digital media among consumers.

Bioengineered Ingredients

Some natural cosmetics are useless and even make troubles. For example, some natural ingredients coming from extensive crops decrease biodiversity and promotes deforestation. The solution for this problem is bioengineered actives, which optimise natural ingredients. The use of biotechnology allows the cosmetic industry to achieve sustainable ingredients redefining the concept of natural cosmetics.

Source: Mohd Riyaz Beg - Research & Marketing challenges and global compliance - [2020]

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