# Market Study: Biobased Surfactants





# This brochure provides further information on the study "Biobased Surfactants (1st edition)"

#### **The Market Study in Brief**

Biotechnology for the bathroom: Household cleaners and creams are increasingly being produced using bacteria and fungi, more specifically rhamnolipids and sophorolipids. Surfactants are among the first everyday chemical products that are already being produced in large quantities not from petroleum but from renewable raw materials. Ceresana has studied the global market produced in whole or in part from renewable biomass, i.e. based on sugar or fatty alcohol from vegetable oils. The study forecasts that bio-based surfactants will reach sales of USD 34 billion by 2032. In North America and Europe, the researchers expect growth of more than 3%, and in other regions of the world even more than 6%.

### Biobased cleaning agents for households and industry

Surfactants enable water and oil to mix, they can form foam and facilitate the detachment of dirt. Washing powders and liquid detergents largely consist of surfactants. These chemicals are also used, for example, as emulsifiers in cosmetics, as dispersants in paints and printing inks or as antistatic additives in plastics and textile fibers. Industrial applications include the extraction of crude oil and the mining of ores. The most important sales market is household detergents and cleaning agents, which account for around 43% of global sales.

#### Sugar as an alternative to petroleum

All surfactants consist of a water-repellent and a water-attracting part, both of which can be biobased. Ceresana analysts expect the greatest growth for non-ionic surfactants, which carry no charge. These include alkyl polyglycosides (APGs), currently the most important sugar surfactants: They can be produced entirely from plants, are less sensitive to hardness than anionic surfactants, are already effective at lower temperatures and

are considered to be more compatible with the environment and health. APGs could become an alternative to the surfactants that are still most commonly used today: the anionic linear alkylbenzene sulfates (LAS). They foam strongly and have high washing power but are produced from petroleum and are not fully biodegradable.

#### **Biochemicals in a Cocktail**

In the context of the bioeconomy and climate protection, the circular economy and green chemistry, biobased surfactants promise not only a reduction in the ecological footprint and greater independence from fossil raw materials, but also new recycling options for organic waste and by-products, for example from the paper and wood industry or biofuel production. Surfactants are often mixed with other chemicals, in detergents, for example, with chelating agents, which ideally are also available as organic versions.

#### The current market report:

**Chapter 1** provides a comprehensive analysis of the global market - including forecasts up to 2032: the development of **demand** and **sales** is outlined for 7 world regions. Demand and revenues are also broken down for each of the **applications**. Demand is recorded for the following **product types**: Anionic, Cationic, Non-ionic, and Other surfactants.

In **Chapter 2**, the market is examined individually for **25 countries**. Demand and revenues are are broken down for the following applications: Detergents & cleaning agents, Industrial cleaning agents, Personal care & cosmetics, Textiles & leather, Paints & plastics, and Others.

**Chapter 3** provides **59 company profiles** of the most important manufacturers, such as BASF, Clariant, Croda, JiangSu WanQi, Kao, Nouryon, Stepan, and Wilmar.

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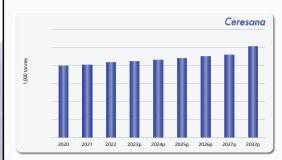
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The demand for biobased surfactants in Germany amounted to X tonnes in 2022. We expect demand to increase by X% p.a. on average and to be around X tonnes by 2032. Revenues generated with biobased surfactants amounted to approximately EUR X billion in 2022. We expect an average increase of X% per year until 2032.



Graph: Demand in Germany from 2020 to 2032

Revenues	2020	2021	2022	2023p	2024p	2025p	2026p	2027p	2032p	2022- 2032
Million USD	х	х	х	х	х	х	х	×	×	X% p.a.
Million EUR	х	х	х	x	х	х	х	×	×	X% p.a.

In 2022, "detergents and cleaning agents" accounted for the largest share of total demand for biobased surfactants. Demand in the area of "paints and plastics" is expected to develop most dynamically over the next ten years, at X% p.a.

in 1,000 tonnes	2020	2021	2022	2023p	2024p	2025p	2026p	2027p	2032p	2022
Detergents and Cleaners	х	х	х	х	х	х	х	×	×	X% p.a.
Industrial Cleaners	×	х	х	×	×	x	х	×	×	X% p.a
Personal Care & Cosmetics	х	х	х	х	х	х	х	×	×	X% p.a
Textiles and Leather	×	х	х	×	×	x	х	×	×	X% p.a
Paints and Plastics	х	х	х	х	х	х	х	×	×	X% p.a
Other Applications	х	х	х	х	х	х	х	×	×	X% p.a
Total	x	х	х	x	x	x	х	×	×	X%

2020	2021	2022	2023p	2024p	2025p	2026p	2027p	2032p	2022
x	х	х	х	х	x	x	×	×	X% p.a.
×	х	х	×	х	х	х	×	×	X% p.a.
×	х	х	х	х	х	х	×	×	X% p.a.
×	х	х	x	х	х	х	×	×	X% p.a.
х	х	х	х	х	х	х	×	×	X% p.a.
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Million EUR	2020	2021	2022	2023p	2024p	2025p	2026р	2027p	2032p	2022-
Detergents and Cleaners	х	х	Х	х	х	×	×	×	×	X% p.a.
Industrial Cleaners	х	х	х	х	х	х	х	×	×	X% p.a.
Personal Care & Cosmetics	х	х	х	х	х	х	х	×	×	X% p.a.
Textiles and Leather	х	х	х	х	х	х	х	×	×	X% p.a.
Paints and Plastics	х	х	х	х	х	х	х	×	×	X% p.a.
Other Applications	х	х	Х	х	х	x	x	×	×	X% p.a.
Total	х	x	х	x	x	x	х	×	×	X% p.a.

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# Market Study: "Biobased Surfactants (1st edition)" 25 Countries, 59 Producers, 290 Pages, 67 Graphs, 170 Tables, 10/2023

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(For each country: Revenues and demand split by application as well as demand split by product type)

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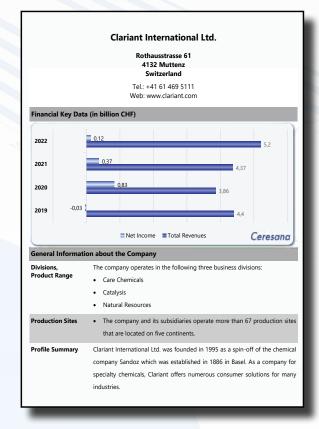
India (3)

Japan (7)

Malaysia (1)

Singapore (3)

South Korea (1)



In 2022, the company employed 11,148 people. The same year, total assets amounted to CHF 6.19 billion. Additionally, Clariant operates 10 research and development centers and expensed about CHF 166 million into R&D.

The company is divided into the three business divisions Care Chemicals, Catalysis and Natural Resources.

Split by business segments, 40.4% of the company's revenues in 2022 were generated with Care Chemicals, 19% with Natural Resources, and 40.6% with Catalysis

Split by regions, 41% of revenues in 2022 were generated in Europe, 29% in Asia-Pacific, 18% in North America, and 12% in Latin America.

Clariant is listed on the SIX Swiss Exchange.

The quality and environmental management systems are certified according to ISO 9001 and ISO 14001. Additionally, the company is certified according to OHSAS 18001.

#### Specific Information about Biobased Surfactants

- Lauryl alcohol ethoxylates
- Cetostearyl alcohol ethoxylates
- Castor oil ethoxylates
- Hydrogenated castor oil ethoxylates
- Oleic acid ethoxylates
- Polyglyco

They are suitable for a variety of industries, such as home care, personal care, paints & coatings, industrial lubricants, and crop solutions.

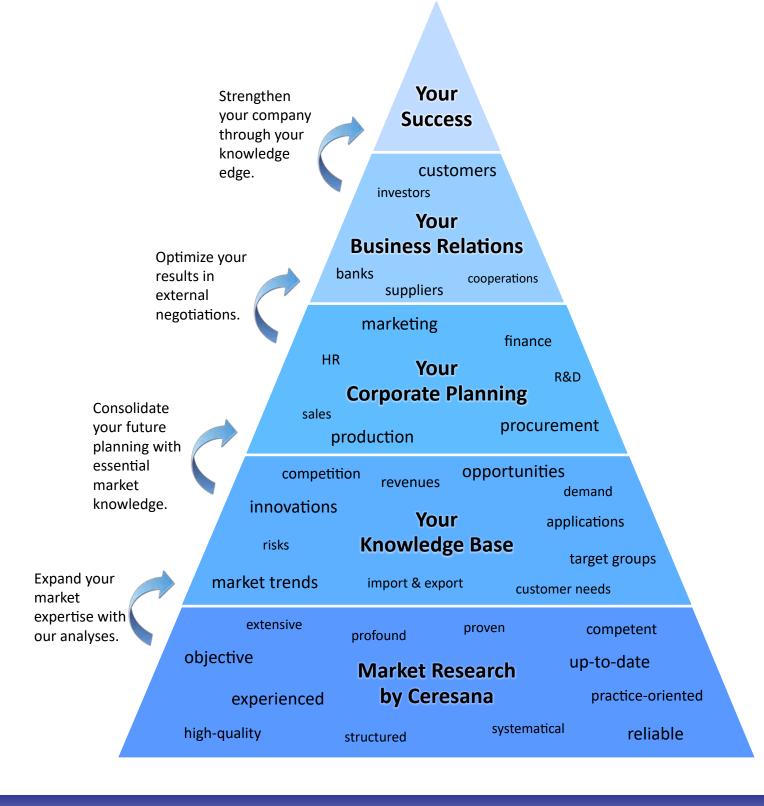
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<sup>\*</sup>Note: The profiles are assigned to the country in which the company or holding is headquartered. Profiles also include JVs and subsidiaries.

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**Plastic Films - Europe** 

**Plastic Films - World** 

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