

MARKET OPPORTUNITIES

Market size – TT Product Applications & MHE

When combining the market size of the 5 categories covered by Biomimetic's chemical compositions, the market for **household cleaning products alone**, (excluding commercial cleaning) is estimated conservatively at over \$250 billion, growing at 4.4% a year (Household)

Cleaning Products Market Size | Global Report [2032]).

The Antimicrobial Coatings Market reached at over USD 4.6 billion in 2023 and is estimated to register a CAGR of over 8.8% between 2024 and 2032, led by the rising need to limit hospital-acquired infections (HAIs).

Further statistics on the market size would only confirm Biomimetic's market opportunities represent a massive markets with significant revenue potential.

In the Home Care, **Institutional & Industrial Cleaning** (HI&I) industry most of the largest trends in cleaning surround what Biomimetic has developed over the last years.

Such trends are below:

Sustainability and Eco-Friendly Solutions:

In an era where environmental consciousness is at its peak, consumers are increasingly seeking cleaning products that go beyond mere cleanliness.

The demand for sustainability has given rise to eco-friendly solutions, featuring biodegradable ingredients, minimalistic packaging, and an overall commitment to reducing the environmental impact of household cleaning.

Natural and Non-Toxic Ingredients Take Center Stage:

With a growing awareness of the chemicals present in traditional cleaning products, consumers are making a shift towards chemical compositions with natural and non-toxic ingredients.

Products free from hazardous chemicals, fragrances, and artificial dyes are gaining popularity as individuals prioritise the well-being of both their homes and the planet.

Smart Cleaning Technology Revolutionises the Industry:

The integration of smart technology into cleaning products is no longer a futuristic concept, but a present reality.

Robotic floor cleaners connected cleaning appliances, and devices with automation and sensor technology are becoming staples in modern households.

The convenience and efficiency offered by these innovations are reshaping the way we approach household cleaning. Specific product formulations for these types of applications can be developed and marketed as such.

Customisable and DIY Cleaning Solutions:

Empowering consumers with choice and reducing waste, customisable cleaning solutions have emerged as a significant trend.

Whether it is through concentrating mixing or refillable containers, individuals are seeking more control over the ingredients used in their cleaning products. This trend aligns with the broader movement towards sustainability and waste reduction.

Companies like [Grove](#) and [CleanCult](#) are already establishing themselves as leaders in this market.

Antimicrobial and Health-Focused Formulations:

In the past few years, global events have heightened the emphasis on hygiene, leading to increased demand for cleaning products with antimicrobial properties.

Consumers are still drawn to products that claim to kill or inhibit the growth of bacteria and viruses, emphasising the intrinsic link between cleanliness and health.

Ingredient Transparency and Health Awareness:

Today's consumers are more health-conscious than ever, and they want to know what ingredients are in the products they bring into their homes.

The trend of ingredient transparency is on the rise, with consumers actively seeking information about the impact of cleaning product ingredients on their health.

Apps that track and provide detailed information about product ingredients have gained popularity, empowering consumers to make informed choices and fostering a deeper connection between the brands and their users.

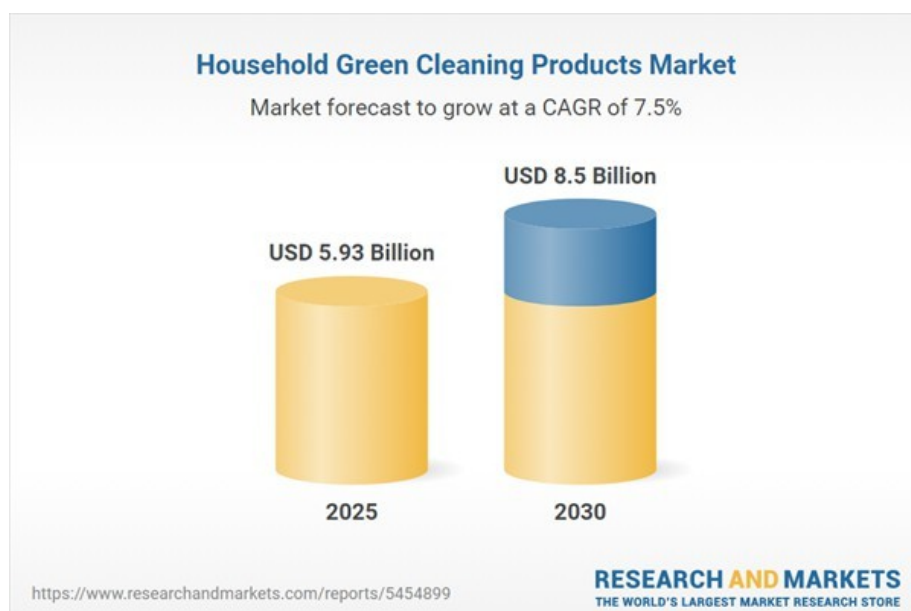
Think Dirty is one example. You can see its popularity in the Apple App Store – ranked #15 in Health & Fitness app downloads, 4.8 stars from 46,000 ratings.

Source: [Household, Industrial & Institutional |](#)

Unveiling the Future: Top 6 Cleaning Product Trends in the US for 2024 This is further supported by the following from Research and Markets. Note this covers the US market only.

The household green cleaning products market is experiencing accelerated growth as organisations intensify focus on sustainable home care solutions.

Senior executives now face pivotal decisions on how to capitalise on changing consumer demands, regulatory frameworks, and supply chain dynamics, while upholding commitments to environmental stewardship.



Household Green Cleaning Products Market

The Household Green Cleaning Products Market grew from USD 5.49 billion in 2024 to USD 5.93 billion in 2025. It is expected to continue growing at a CAGR of 7.53%, reaching USD 8.50 billion by 2030.

Heightened consumer awareness, evolving health priorities, advanced green chemistry, and regulatory momentum are accelerating the sector's expansion.

Leading brands, retailers, and suppliers now embrace green cleaning solutions as part of their long-term growth agendas.

The European market is smaller than the US, but offers much faster growth potential and generally speaking, a strong preference for “natural” products:

Europe Green Cleaning Products Market Overview

Europe Green Cleaning Products Market Size was valued at USD 0.82 Billion in 2024 and is projected to grow at a CAGR of 21.0% to reach USD 4.60 Billion by 2034.

Europe is at the forefront of the global movement towards sustainability, with a strong emphasis on environmental protection, health, and well-being. The region's commitment to reducing its ecological footprint and promoting sustainable practices has significantly impacted the demand for green cleaning products.

As awareness of the harmful effects of conventional cleaning chemicals grows, consumers and businesses alike are increasingly seeking eco-friendly alternatives that are safe, effective, and environmentally responsible.

The green cleaning products market in Europe is thus poised for substantial growth, driven by stringent regulatory frameworks, progressive environmental policies, and a highly conscious consumer base.

Europe Green Cleaning Products Market Drivers & Restraints

Key Driver for growth in European Market:

Stringent Environmental Regulations and Policies Europe is known for its rigorous environmental regulations and policies to protect the ecosystem and public health.

The European Union (EU) has implemented various directives and regulations, such as the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulations, which restrict using hazardous substances in cleaning products.

The EU's Circular Economy Action Plan also encourages the use of sustainable materials and practices across industries.

These stringent regulations and policies compel manufacturers to innovate and produce green cleaning products that meet high environmental standards, driving market growth. The focus on compliance with these regulations ensures that green cleaning products are safe, effective, and environmentally friendly, fostering consumer trust and adoption.

Growing Consumer Awareness and Demand for Sustainable Products European consumers are increasingly aware of conventional cleaning chemicals' environmental and health impacts. This heightened awareness has increased the demand for sustainable and eco-friendly alternatives. Consumers in Europe are more likely to choose products that are biodegradable, non-toxic, and free from harmful chemicals, reflecting a broader trend towards conscious consumerism.

Widespread environmental campaigns, educational initiatives, and the influence of eco-certifications such as the EU Ecolabel further bolster the demand for green cleaning products. As consumers become more discerning and prioritise sustainability, the market for green cleaning products in Europe continues to expand, offering significant opportunities for growth and innovation.

Source: https://www.prophecymarketinsights.com/market_insight/europe-green-cleaning-products-market-5372

As discussed above, the Bio-Eco TT line has huge market opportunities with high potential in traditional markets, but the MHE chemical compositions also offer some attractive opportunities and hope in the areas of fire prevention and fire extinguishment, which has now become a central issue in environmental catastrophes, destruction and costs.

MHE Market Opportunities

The fire retardant and extinguishment market are quite different from Bio-Eco TT-line, but offers a generational opportunity.

Just one fire alone, the Palisade fire in California in early 2025 was estimated to burn 40,000 acres of land, exhumed thousands of structures and caused damages of \$250 billion, not to mention loss of life.

Source: [California wildfires on track to become most costly US disaster](#)

The “**100-year fire**” that people referred to in recent times is now annually or greater. **MHE** provides chemical compositions based on all natural ingredients to stop fires in their tracks, or to prevent them from beginning with.

The video below shows the superior qualities of **MHE** capabilities in preventing fires from spreading.

The power of a product that could be encircled around a fire zone and prevent it from spreading further offers tremendous benefits.

Or people treating their homes with clear, harmless spray that would make the external body of their home fireproof, even with combustable materials like wood etc.

THIS IS THE ATTRACTIVENESS OF THE MHE

FORMULATIONS - MHE Products



No Toxic Fumes
No Side-Effects
No Carcinogens
No Usage Issues
No Recycling Cost
No Smoke Toxicity
No FR Side Effect
No Toxic Products

MHE can also be used to spray fabrics such as furniture, kids’ pajamas, etc. to prevent fires, naturally and without toxins.

Today’s formulas are predominantly carcinogenic or PFAS (“aka “Forever Chemicals”). It’s good to know that at decomposition of the frequently applied PFAS, release Freons, the most hazardous and forbidden chemical to use today,

MHE offers a huge opportunity amongst the forest, municipality, and insurance markets. The savings from applying MHE in a prevention or live fire situation could save a fire event from economic catastrophe.

It is believed, this product is believed to offer a compelling reason for those managing fire risk to purchase the product and keep it on hand for when the time arises when it is needed most, or in times of extreme dryness in forests or other areas where prevention can make a huge difference in the eventual outcome of a fire incident.

Below (Video link) shows MHE sprayed on forest brush and its ability to manage a flammable situation. The middle of the tree brush was not sprayed with MHE but the left and right were, which stopped the spread of the fire.

https://www.youtube.com/watch?v=lzZlK_hPFyY

Other Videos: www.youtube.com/trulstechgroup

Competition

Competition for Biomimetic's chemical compositions is likely to come from the all-natural and organic categories of products for many of the Bio-Eco TT-line categories. While traditional chemical formulations still have huge market share and competitive advantages, buyers looking for Biomimetic-like formulations are likely to be in the more environmentally conscious products space and less price sensitive.

That being said, the traditional companies in the spaces are all making acquisitions and efforts to adjust to the shifting preferences of consumers and traditional chemical companies could greatly benefit from Biomimetic's chemical compositions and unique chemistry.

The Biomimetic's chemical composition have a story to tell, and their success will be determined by the story, packaging, sales and marketing strategies and other factors.

Biomimetic has unique chemistries and should compete well on a technical basis. However, this IP portfolio also has tremendous potential and great, innovative chemistry that has high potential for additional products using similar chemistry once the buyer better understands the chemical compositions.