+357 96 030922
info@marketpublishers.com

Fatty Acid Methyl Ester (FAME) Market Forecasts to 2030 – Global Analysis By Fatty Acid Type (Saturated Fatty Acids and Unsaturated Fatty Acids), Source (Vegetable Oils, Animal Fats, Algae Oils, Waste Oils and Other Sources), Production Method, Application and By Geography

https://marketpublishers.com/r/F1DA63A3D6E2EN.html
Date: February 2025
Pages: 150
Price: US$ 4,150.00 (Single User License)
ID: F1DA63A3D6E2EN

Abstracts

According to Stratistics MRC, the Global Fatty Acid Methyl Ester (FAME) Market is accounted for $17.52 billion in 2024 and is expected to reach $23.84 billion by 2030 growing at a CAGR of 6.5% during the forecast period. Fatty Acid Methyl Ester (FAME) refers to a group of chemical compounds derived from fatty acids through a process called transesterification, where the fatty acids are reacted with methanol to form methyl esters. FAME is known for its renewable, biodegradable, and cleaner-burning properties, contributing to reduced greenhouse gas emissions compared to traditional fossil fuels.

According to a study report, Coconut oil is a rich source of saturated fatty acids, and short#- #and medium-chain fatty acids account for 70% of these fatty acids.

Market Dynamics:

Driver:

Growing demand for renewable energy sources

FAME is a key component of biodiesel, a cleaner alternative to fossil fuels. As countries strive to reduce carbon emissions and combat climate change, governments have

+357 96 030922
info@marketpublishers.com

introduced policies and mandates to increase the use of renewable fuels, boosting biodiesel consumption. FAME, derived from renewable feedstocks like vegetable oils and animal fats, meets sustainability goals by providing an eco-friendly energy source. This rising demand for cleaner energy solutions drives FAME production and adoption in transportation, industrial, and energy sectors globally.

Restraint:

Storage & transport challenges

FAME faces storage and transport challenges due to its higher viscosity, which can lead to clogging in fuel lines and equipment. Additionally, FAME is hygroscopic, leading to potential microbial growth and corrosion. These issues require specialized infrastructure for handling, storage, and transportation, increasing costs. The need for compatible storage tanks, pipelines, and maintenance adds complexity to the logistics, thereby hampering market growth.

Opportunity:

Government initiatives and subsidies

Governments worldwide, particularly in regions like North America, Europe, and Asia, have implemented renewable fuel standards and mandates, such as the Renewable Fuel Standard (RFS) in the U.S. These policies encourage the use of biodiesel made from FAME, supporting cleaner energy solutions and reducing greenhouse gas emissions. Subsidies and tax breaks for biodiesel producers make FAME more cost-competitive with conventional fuels, accelerating its use in transportation, industry, and energy, thus boosting market growth.

Threat:

High production costs

Fatty Acid Methyl Ester (FAME) has high production costs due to several factors, including the expensive feedstocks (vegetable oils and animal fats), energy-intensive transesterification process, and the use of catalysts. Additionally, fluctuations in raw material prices and the need for specialized equipment further contribute to its high production cost. These elevated costs make FAME less competitive compared to traditional fossil fuels, limiting its widespread adoption.

+357 96 030922
info@marketpublishers.com

Covid-19 Impact

The covid-19 pandemic significantly impacted the fatty acid methyl ester (FAME) market by disrupting supply chains, reducing demand for transportation fuels, and halting biodiesel production due to lockdowns. Economic slowdowns led to lower fuel consumption, which affected the demand for biodiesel made from FAME. However, as economies recover, the market is seeing a rebound, driven by increasing environmental concerns, government support for renewable energy, and a growing shift towards sustainable fuel alternatives to fossil fuels.

The transesterification segment is expected to be the largest during the forecast period

The transesterification segment is predicted to secure the largest market share throughout the forecast period. Transesterification is the primary method used to produce Fatty Acid Methyl Ester (FAME). It involves reacting vegetable oils or animal fats with methanol, using a catalyst such as sodium hydroxide or potassium hydroxide. The process is widely used due to its efficiency and cost-effectiveness in biodiesel production.

The cosmetics & personal care segment is expected to have the highest CAGR during the forecast period

The cosmetics & personal care segment is anticipated to witness the highest CAGR during the forecast period due to its emollient, moisturizing, and skin-conditioning properties. FAME, derived from natural oils, is commonly found in creams, lotions, and hair care products, where it enhances texture, improves skin absorption, and provides a smooth, non-greasy finish. FAME’s biodegradable and eco-friendly nature makes it a preferred choice for natural and sustainable formulations.

Region with largest share:

Asia Pacific is expected to register the largest market share during the forecast period driven by increasing demand for biodiesel as an eco-friendly alternative to fossil fuels. Key countries like China, India, and Indonesia are major producers and consumers, driven by government incentives promoting renewable energy and reducing carbon emissions. The region's large agricultural sector provides abundant feedstocks like palm oil, soybeans, and jatropha. Additionally, rising energy prices and environmental awareness are further accelerating the adoption of FAME-based biodiesel in

+357 96 030922
info@marketpublishers.com

transportation and industrial sectors.

Region with highest CAGR:

North America is expected to witness the highest CAGR over the forecast period due to growing demand for renewable fuels and government mandates on biodiesel usage. The U.S. and Canada are key players, with policies like the Renewable Fuel Standard (RFS) encouraging the use of biodiesel made from FAME. The region’s emphasis on reducing greenhouse gas emissions and dependence on fossil fuels is driving the shift toward sustainable energy sources. Additionally, North America's agricultural production provides ample feedstocks, such as soybean oil and animal fats, supporting FAME market growth.

Key players in the market

Some of the key players profiled in the Fatty Acid Methyl Ester (FAME) Market include Cargill Inc., BASF SE, Wilmar International Limited, Archer Daniels Midland Company, Evonik Industries AG, Neste Corporation, The DOW Chemical Company, Kraton Polymers, COFCO Corporation, Imperial Oil, Alfa Chemistry, Arkema Global, Louis Dreyfus Company, Maruzen Oil Co., Ltd., Aemetis, Inc., Biowanze S.A., Infinita Renovables S.A. and TransEnergy Fuels.

Key Developments:

In May 2023, Alfa Chemistry expanded its fatty acid and ester product line that reflects the company's commitment to meeting the increasing demand for high-quality lipids and fatty acids in scientific and industrial applications. The product line is designed to support a range of research purposes, including biochemical studies, formulation of bio-based products, and industrial applications that require specialized fatty acid derivatives.

In February 2023, Arkema launched Oleris® Esterol A, a bio-based product, specifically designed to meet the growing demand for sustainable materials in various industries. The product consists of more than 75% C18 fatty acid methyl esters. This product is part of Arkema's broader initiative to provide innovative, bio-based solutions that contribute to sustainable development across various sectors.

Fatty Acid Types Covered:

+357 96 030922
info@marketpublishers.com

Saturated Fatty Acids

Unsaturated Fatty Acids

Sources Covered:

Vegetable Oils

Animal Fats

Algae Oils

Waste Oils

Other Sources

Production Methods Covered:

Transesterification

Supercritical Methanol Process

Homogeneous Catalysis

Heterogeneous Catalysis

Microbial Synthesis

Enzymatic Process

Other Production Methods

Applications Covered:

Automotive

+357 96 030922
info@marketpublishers.com

- Agriculture
- Chemicals & Petrochemicals
- Energy
- Cosmetics & Personal Care
- Food & Beverages
- Other Applications

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - Italy
  - France
  - Spain
  - Rest of Europe
- Asia Pacific

+357 96 030922
info@marketpublishers.com

- Japan
- China
- India
- Australia
- New Zealand
- South Korea
- Rest of Asia Pacific

South America

- Argentina
- Brazil
- Chile
- Rest of South America

Middle East & Africa

- Saudi Arabia
- UAE
- Qatar
- South Africa
- Rest of Middle East & Africa

What our report offers:
- Market share assessments for the regional and country-level segments

+357 96 030922
info@marketpublishers.com

- Strategic recommendations for the new entrants
- Covers Market data for the years 2022, 2023, 2024, 2026, and 2030
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

10 KEY DEVELOPMENTS

+357 96 030922
info@marketpublishers.com

11 COMPANY PROFILING

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Fatty Acid Methyl Ester (FAME) Market Forecasts to 2030 – Global Analysis By Fatty Acid Type (Saturated Fatty Acids and Unsaturated Fatty Acids), Source (Vegetable Oils, Animal Fats, Algae Oils, Waste Oils and Other Sources), Production Method, Application and By Geography

Product link: https://marketpublishers.com/r/F1DA63A3D6E2EN.html

Price: US$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/F1DA63A3D6E2EN.html