

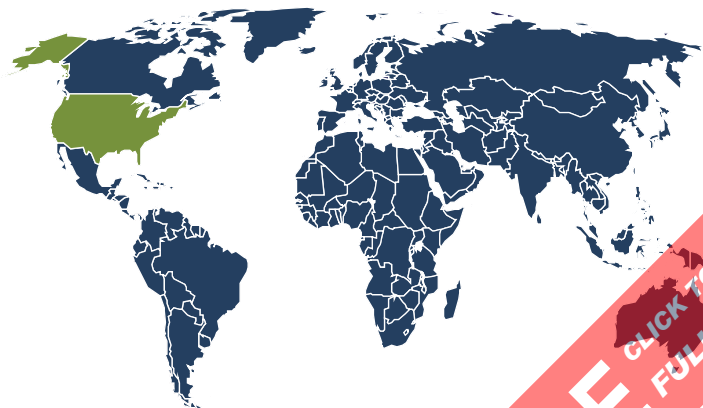


Freedonia Focus Reports
US Collection

Enzymes:

United States

June 2016



Highlights

Market Environment

Historical Trends | Key Economic Indicators | Environmental and Regulatory Factors
NAFTA Overview

Segmentation and Forecasts

Products | Markets

Industry Structure

Industry Composition and Characteristics | Additional Companies Cited

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ABOUT THIS REPORT

Scope & Method

This report forecasts US enzymes demand in US dollars at the manufacturers' level to 2020. Total demand is segmented by product in terms of:

- carbohydrases
- proteases
- polymerases
- nucleases
- other products such as lipases, phytases, and catalases.

Enzymes used as nutraceutical products (ie, dietary supplements) are included in the scope of this report, while enzymes used as active pharmaceutical ingredients are not.

Total demand is also segmented by market as follows:

- biofuel production
- food and beverages
- research and biotechnology
- cleaning products
- other markets such as animal feed, diagnostics, and cosmetics and toiletries.

To illustrate historical trends, total demand is provided in an annual series from 2005 to 2015; the various segments are reported at five-year intervals for 2010 and 2015.

This report quantifies trends in various measures of growth. Growth (or decline) expressed as an average annual growth rate (AAGR) is the least squares growth rate, which takes into account all available datapoints over a period. Growth calculated as a compound annual growth rate (CAGR) employs, by definition, only the first and last datapoints over a period. The CAGR is used to describe forecast growth, defined as the expected trend beginning in the base year and ending in the forecast year. Readers are encouraged to consider historical volatility when assessing particular annual values along the forecast trend, including in the forecast year.

Key macroeconomic indicators are also provided at five-year intervals with CAGRs for the years corresponding to other reported figures. Other various topics, including profiles of pertinent leading suppliers, are covered in this report. A full outline of report items by page is available in the [Table of Contents](#).

Sources

Enzymes: United States (FF35017) is based on [World Enzymes](#), a comprehensive

industry study published by The Freedonia Group in June 2016. Reported findings represent the synthesis and analysis of data from various primary, secondary, macroeconomic, and demographic sources including:

- firms participating in the industry, and their suppliers and customers
- government/public agencies
- national, regional, and international non-governmental organizations
- trade associations and their publications
- the business and trade press
- indicator forecasts by The Freedonia Group
- the findings of other industry studies by The Freedonia Group.

Specific sources and additional resources are listed in the [Resources](#) section of this publication for reference and to facilitate further research.

Industry Codes

The topic of this report is related to the following industry codes:

| NAICS/SCIAN 2007 | | SIC | |
|---|--------------------------------------|-------------------------|--|
| North American Industry Classification System | | Standard Industry Codes | |
| 325199 | All Other Basic Organic Chemical Mfg | 2833 | Medicinal Chemicals and Botanical Products |
| 325411 | Medicinal and Botanical Mfg | | |
| 325413 | In-Vitro Diagnostic Substance Mfg | 2835 | In Vitro and In Vivo Diagnostic Substances |
| | | 2869 | Industrial Organic Chemicals, NEC |

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RESOURCES

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www.freedoniagroup.com

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| <i>3417 World Enzymes</i> , June 2016 | see study contents |
| Related Industry Studies | |
| <i>3354 Drug Delivery Products</i> , December 2015 | see study contents |
| <i>3322 Water Treatment Chemicals</i> , July 2015 | see study contents |
| <i>3285 Enzymes</i> , May 2015 | see study contents |
| <i>3217 World Catalysts</i> , December 2014 | see study contents |
| <i>3207 World Industrial & Institutional Cleaning Chemicals</i> , November 2014 | see study contents |
| Related Focus Reports | |
| <i>Catalysts: United States</i> | see report contents |
| <i>Grain-Based Foods: United States</i> | see report contents |
| <i>Oilfield Chemicals: United States</i> | see report contents |
| <i>Pharmaceuticals: United States</i> | see report contents |
| <i>Processed Food: United States</i> | see report contents |
| <i>Refined Petroleum Products: United States</i> | see report contents |
| <i>Renewable Energy: United States</i> | see report contents |
| <i>World Enzymes</i> | see report contents |
| Freedonia Custom Research | see capabilities |

Trade Publications

| | |
|---|---|
| <i>BioWorld</i> | www.bioworld.com |
| <i>Chemical & Engineering News</i> | http://cen.acs.org |
| <i>Drug Topics</i> | http://drugtopics.modernmedicine.com |
| <i>Genetic Engineering & Biotechnology News</i> | www.genengnews.com |
| <i>ICIS Chemical Business</i> | www.icis.com |
| <i>IHS Chemical Week</i> | www.chemweek.com |
| <i>Med Ad News</i> | www.medadnews-digital.com |

Agencies & Associations

| | |
|--|--|
| Biotechnology Innovation Organization | www.bio.org |
| International Council of Chemical Associations | www.icca-chem.org |
| United States Census Bureau | www.census.gov |
| United States Department of Agriculture | www.usda.gov |
| United States Environmental Protection Agency | www.epa.gov |
| United States Food and Drug Administration | www.fda.gov |
| United States International Trade Commission | www.usitc.gov |

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