+44 20 8123 2220
info@marketpublishers.com

Food Ultrasound Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028F By Food Product (Meat and Seafood, Fruits and Vegetables, Beverages, Dairy, Bakery and Confectionery, Others), By Frequency Range (High-Frequency Low-Intensity, Low-Frequency High-Intensity), By Function (Quality Assurance, Microbial Enzyme, Inactivation, Cutting, Emulsification and Homogenization, Cleaning, Others), By Region, Competition

https://marketpublishers.com/r/F06A0E1C3A5AEN.html
Date: September 2023
Pages: 175
Price: US$ 4,900.00 (Single User License)
ID: F06A0E1C3A5AEN

Abstracts

The Global Food Ultrasound Market was valued at USD 150 million in 2022 and is expected to experience strong growth in the forecast period, with a CAGR of 7.12% through 2028. The utilization of ultrasonic techniques in testing various materials and substances is widespread. In the food industry, these methods are extensively employed for the analysis and modification of food products. Low-intensity ultrasound provides valuable insights into physicochemical properties such as composition, structure, physical state, and flow rate. High-intensity pulse ultrasound is utilized to induce changes in the physical and chemical properties of foods, including emulsion creation, cell disruption, chemical reactions promotion, enzyme inhibition, meat tenderization, and modification and crystallization processes. Ultrasound technology finds diverse applications in the food sector, including freezing, harvesting, drying, tampering, bleaching, and sterilizing. The combination of ultrasonic radiation with sterilizing agents helps reduce the presence of microorganisms in food, thereby ensuring food safety. By minimizing processing costs and ensuring food purity,

+44 20 8123 2220
info@marketpublishers.com

ultrasound technology plays a crucial and indispensable role in the food industry.

Key Market Drivers:

Rising Demand for Processed Foods: The increasing demand for processed foods, including fish and raw meat products, is a significant driver for market growth. The market expansion is further fueled by the continuous rise in the geriatric population, the prevalence of chronic illnesses, stringent regulations and standards pertaining to food safety and quality, as well as advancements in the food processing market in developing nations. Moreover, ultrasound technology plays a crucial role in eliminating harmful allergens from processed foods, beverages, and related products. The market is also driven by growing concerns surrounding food safety, such as mislabeling and food adulteration, and the corresponding actions taken by various governmental bodies.

Rising Demand for Food Safety and Quality: The increasing consumer demand for safe and healthy food, driven by mounting concerns about food safety, is a significant driver behind the expansion of the food ultrasound market. Ultrasonic technology plays a vital role in enhancing food safety and quality by enabling early detection of food contamination and ensuring that only safe and high-quality products reach consumers. It is employed to detect bacteria, fungi, and other microorganisms in food, as well as to assess the quality of meat, fish, and fruit by identifying defects, blemishes, and anomalies. This technology has the potential to mitigate the global health issue of foodborne illnesses caused by contaminated food. Hence, the rising demand for food safety and quality is anticipated to drive market growth throughout the forecast period.

Technological Innovations

The food industry, like other sectors, is embracing new technological approaches to enhance testing operations. Leading manufacturers in the food industry continuously collaborate to develop cutting-edge ultrasonic detection devices. For example, the 2015 collaboration between Hitachi High-Technologies Corporation and QIAGEN N.V. aimed to achieve significant breakthroughs in molecular testing. The objective of this collaboration was to develop new automated PCR and NGS systems.

Traditional thermal food processing methods can alter the flavor, color, texture, or nutritional value of a product. The increasing demand for process efficiency and environmentally friendly technologies has led to a growing need for energy-efficient ultrasonic technology. Ultrasonic technology not only helps preserve sensory

+44 20 8123 2220
info@marketpublishers.com

characteristics but also improves productivity. Moreover, it caters to the modern consumer's preference for natural, fresh, and minimally processed meals, as it eliminates the need for preservatives or additives in the manufacturing process.

Multiple Use in the Food Industry

The ultrasonic technique is employed for the testing and analysis of various materials, with a particular emphasis on its application in the food industry. Low-intensity ultrasound provides valuable insights into physicochemical properties such as composition, structure, physical state, and flow rate. On the other hand, high-intensity ultrasound is utilized to alter the physical or chemical characteristics of food, enabling the creation of emulsions, disruption of cells, promotion of chemical reactions, enzyme inhibition, meat tenderization, and modification and crystallization processes.

In the food sector, ultrasound finds diverse applications, including freezing, harvesting, drying, tampering, bleaching, and sterilizing. The utilization of ultrasonic radiation in conjunction with sterilizing agents effectively reduces microbial contamination in food. By minimizing processing costs and ensuring the purity of food products, ultrasound plays a crucial role in enhancing food safety and quality.

Key Market Challenges

Insufficient Skilled Labor

The global food ultrasound market may encounter challenges due to the limited availability of skilled labor and technological errors. Furthermore, stringent food safety regulations in various countries can impact market growth. Nevertheless, the growing adoption of ultrasound technology in the packaged food and beverages sector presents significant revenue opportunities for market players. Another obstacle to consider is the requirement for substantial capital investment, particularly in developing countries.

High Maintenance Costs

Food ultrasound equipment requires a significant initial investment from end-users, posing a barrier for small and medium-sized food manufacturers with limited budgets. This high cost of technology also restricts the entry of new players, resulting in decreased competition and ultimately leading to higher prices for customers. These factors present challenges to the growth of the market at hand.

+44 20 8123 2220
info@marketpublishers.com

The growth of the market is further hindered by technological complexities and the need for significant capital investment. Additionally, stringent food safety regulations and a lack of skilled technicians impede market growth. Moreover, ultrasound often impacts the chemical and physical properties of food, resulting in off-flavors, discoloration, and other undesirable effects. These factors serve as obstacles to market expansion.

Key Market Trends

Adoption of Technology by the Dairy Industry

Ultrasound food testing is gaining popularity in the dairy industry, as highlighted in the report. This technology is being embraced by dairy companies for the analysis of milk and dairy products, offering advantages over manual testing methods that are both time-consuming and costly. Ultrasound analysis allows for the detection of changes in milk composition, such as fat and protein content, which play a critical role in maintaining product quality. Additionally, it enables the measurement of milk homogenization, cheese texture, and other parameters that are vital in the dairy industry. As a result, the increasing utilization of ultrasound technology in the dairy industry is expected to have a positive impact on market growth during the forecast period.

Increasing Use in Food Product Packaging

The growing adoption of ultrasound technology in the packaged food and beverage industry presents a significant opportunity for the market. Moreover, ultrasonic food technology offers a solution to these challenges while also improving energy efficiency in the process. Additionally, the food industry benefits from various applications such as crystallization, degassing, freezing, extraction, drying, filtration, and bleaching, which contribute to the market's growth during the forecast period. Furthermore, factors such as increasing demand for adaptation, growth in food processing industries and food sectors, as well as the need for food modification and examination, are expected to drive the growth of the food ultrasound market. Lastly, the market is anticipated to be propelled by the increasing demand for higher quality and affordable food products.

Segmental Insights

Food Product Type Insights

The ultrasound market is segmented by food product, including meat & seafood, fruits & vegetables, beverages, dairy, and bakery & confectionery, among others. The bakery &

confectionery segment encompasses chocolates, cakes, and other confectionery products. Ultrasound technology is effectively utilized in the food industry to enhance quality and ensure process control. It plays a crucial role in inspecting the composition of meat, fish, and poultry products, as well as in quality control processes for vegetables, cheeses, oils, bread, and cereals. Additionally, it is employed to detect adulteration in honey and for protein analysis.

Ultrasound technology holds significant applications in meat and seafood processing. The increasing demand for process efficiency, achieved through time optimization and energy-saving technology, is expected to drive market growth.

The food ultrasound market is further segmented based on the frequency range, categorized as low-intensity high-frequency and high-intensity low-frequency. The selection of frequency depends on the specific food product and the desired function to be performed. Certain processes, such as microbial inactivation and cutting, can be accomplished using both high and low ultrasound frequencies.

Function Type Insights

Ultrasound technology in food is categorized into various applications, including microbial inactivation, quality assurance, emulsification & homogenization, cleaning, and cutting, among others. Quality assurance, being the largest segment in terms of demand in 2016, was sought after by companies aiming to enhance their business processes' efficiency. Following quality assurance, microbial inactivation emerged as the second-largest segment in terms of demand. Other notable applications encompass sterilization, drying, mixing, freezing, pasteurization, crystallization, pickling, marinating, fermentation, and thawing.

Regional Insights

By 2028, the North American market is anticipated to dominate the food ultrasound market. The Asia Pacific region is expected to experience the fastest growth, driven by demand from emerging economies including China, India, and Japan. These countries have recently adopted advanced food processing techniques to meet the rising food demand. Other factors contributing to the growth of the Asia Pacific market include the rapid development of economies and increased research endeavors to introduce new technologies.

Key Market Players

+44 20 8123 2220
info@marketpublishers.com

Hitachi Corporation

Siemens Healthcare

Analogic Corporation

FUJIFILM Holdings Corporation

Koninklijke Philips N.V

Esaote S.p.A

Mindray Medical International Ltd.

Robert Bosch GmbH

Emerson Electric Co.

Buehler’s Fresh Foods

Report Scope:

In this report, the Global Food Ultrasound Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Global Food Ultrasound Market, By Food Product:

Meat and Seafood

Fruits and Vegetables

Beverages

Dairy

Bakery and Confectionery

+44 20 8123 2220
info@marketpublishers.com

Others

Global Food Ultrasound Market, By Frequency Range:

High-Frequency Low-Intensity

Low-Frequency High-Intensity

Global Food Ultrasound Market, By Function:

Quality Assurance

Microbial Enzyme

Inactivation

Cutting

Emulsification and Homogenization

Cleaning

Others

Global Food Ultrasound Market, By Region:

North America

United States

Canada

Mexico

Europe

France

United Kingdom

+44 20 8123 2220
info@marketpublishers.com

Italy

Germany

Spain

Asia-Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Food

+44 20 8123 2220
info@marketpublishers.com

Ultrasound Market.

Available Customizations:

Global Food Ultrasound market report with the given market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

+44 20 8123 2220
info@marketpublishers.com

Contents

+44 20 8123 2220
info@marketpublishers.com

7. EUROPE FOOD ULTRASOUND MARKET OUTLOOK

+44 20 8123 2220
info@marketpublishers.com

8. ASIA-PACIFIC FOOD ULTRASOUND MARKET OUTLOOK

+44 20 8123 2220
info@marketpublishers.com

9. SOUTH AMERICA FOOD ULTRASOUND MARKET OUTLOOK

+44 20 8123 2220
info@marketpublishers.com

10. MIDDLE EAST AND AFRICA FOOD ULTRASOUND MARKET OUTLOOK

+44 20 8123 2220
info@marketpublishers.com

+44 20 8123 2220
info@marketpublishers.com

+44 20 8123 2220
info@marketpublishers.com

I would like to order

Product name: Food Ultrasound Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028F By Food Product (Meat and Seafood, Fruits and Vegetables, Beverages, Dairy, Bakery and Confectionery, Others), By Frequency Range (High-Frequency Low-Intensity, Low-Frequency High-Intensity), By Function (Quality Assurance, Microbial Enzyme, Inactivation, Cutting, Emulsification and Homogenization, Cleaning, Others), By Region, Competition

Product link: https://marketpublishers.com/r/F06A0E1C3A5AEN.html

Price: US$ 4,900.00 (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/F06A0E1C3A5AEN.html

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

**All fields are required

Custumer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms

+44 20 8123 2220
info@marketpublishers.com

& Conditions at https://marketpublishers.com/docs/terms.html

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970