

# Particle Size Analysis Market worth \$689.70 million by 2030 - Exclusive Report by 360iResearch

The Global Particle Size Analysis Market to grow from USD 420.13 million in 2022 to USD 689.70 million by 2030, at a CAGR of 6.39%.

PUNE, MAHARASHTRA, INDIA,

December 7, 2023 /EINPresswire.com/ -- The "Particle Size Analysis Market by Technology (Dynamic Light Scattering, Laser Diffraction, Nanoparticle Tracking Analysis), Dispersion (Dry Particle, Spray Particle, Wet Particle), End User -Global Forecast 2023-2030" report has been added to 360iResearch.com's offering.



## The Global Particle Size Analysis

Market to grow from USD 420.13 million in 2022 to USD 689.70 million by 2030, at a CAGR of 6.39%.

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Particle size analysis involves determining the size distribution of particles in a sample, crucial for various industries such as pharmaceuticals, chemicals, and materials. Increasing demand for nanotechnology applications and growing focus on quality control in manufacturing processes are elevating the demand for particle size analyzers. The growing importance of understanding particle behavior for drug delivery across the health & life science sector is expanding the growth of the particle size market. The complexity of analyzing nanoparticles and the increasing cost of development of particle size analyzers are hindering the growth of the market. Rising technological advancements associated with the development of novel particle size analyzers that help in precise measurements are expected to create opportunities for the growth of the particle size analysis market.

Technology: Higher adoption of dynamic light scattering for fast, precise, and reproducible quality check with low amounts of sample

Dynamic light scattering (DLS) is widely used to determine the size distribution profile of smaller particles in suspension or polymers in a solution. With this technology, particles are hit with a laser, and the scattered light intensity is measured over time. In laser diffraction, a beam of laser light is scattered by a particle-rich sample, with the angle of light offsets providing data on the size of the particles. Nanoparticle tracking analysis (NTA) utilizes the properties of light scattering and Brownian motion to provide detailed and robust size distribution and concentration measurements for nanoparticles. Resonant mass measurement (RMM) measures the individual particles' buoyant mass, volume, and density, offering a direct mass measurement for particulates in the nanoscale. Taylor dispersion analysis (TDA) measures hydrodynamic sizes and offers high-resolution sizing for different materials such as proteins, polymers, and particles.

Dispersion: Growing applications of wet particle dispersion for fine particle size analysis Dry particle dispersion refers to the process in which particles are distributed within a dry medium, usually air. This method is typically chosen where there is a need to preserve the natural morphological characteristics of the particles, as some particles may alter their physical properties in the presence of a liquid medium. Spray particle dispersion involves the conversion of a liquid substance into a spray of aerosol, which is then characterized by its particle size distribution. This dispersion type is particularly useful in industries such as pharmacology and chemistry by measuring particles without the risk of contaminants. Wet particle dispersion involves particles being dispersed in a liquid medium to measure their size. This is typically preferred when working with materials that may be sensitive to drying or are prone to agglomeration in a dry state.

End-User: Increasing application of particle size analysis in the pharmaceutical industry for effective drug formulation and delivery

In agriculture & forestry, particle size analysis helps in assessing soil structure, determining soil fertility, and optimizing irrigation practices. It helps in understanding the distribution of soil particles, aiding in effective land management and crop productivity. In the chemical industry, particle size analysis is essential for quality control during manufacturing processes. It ensures consistent product quality, uniformity in particle size distribution, and the desired properties of chemical compounds. Particle size analysis is employed in the food & beverage industry to control and optimize the texture, mouthfeel, and stability of products. It is vital for quality assurance, ensuring that food and beverage formulations meet the required standards and consumer expectations. In mining operations, particle size analysis is used to characterize and optimize the size distribution of mined materials. It aids in understanding the efficiency of mineral processing techniques, improving resource recovery, and optimizing the performance of grinding and milling processes. In the pharmaceutical industry, precise particle size analysis is critical for drug formulation and delivery. It influences drug dissolution rates, bioavailability, and the overall efficacy of pharmaceutical products. Quality control in pharmaceutical manufacturing relies on accurate particle size measurements to ensure consistent and effective medications.

## Regional Insights:

The particle size analysis market in the Americas is witnessing significant growth, propelled by the region's diverse industrial landscape. Industries such as pharmaceuticals, mining, and food & beverage are driving the demand for precise particle size measurements. The Asia-Pacific sectors, such as pharmaceuticals, chemicals, and materials heavily rely on particle size analysis for quality control and research purposes. With the rise of nanotechnology applications and the increasing focus on product quality, the demand for precise particle size measurements is increasing in Asia-Pacific. Growing advancements in technology foster the development of accurate and efficient particle size analysis methods to meet the evolving needs of diverse industries, which is expected to create a platform for market growth in Asia-Pacific. In the Europe, Middle East, and Africa region, the particle size analysis market is witnessing steady growth driven by applications in pharmaceuticals, cosmetics, and materials science. With a focus on product quality and innovation, various industries in the region are increasingly adopting advanced particle size analysis technologies.

## FPNV Positioning Matrix:

The FPNV Positioning Matrix is essential for assessing the Particle Size Analysis Market. It provides a comprehensive evaluation of vendors by examining key metrics within Business Strategy and Product Satisfaction, allowing users to make informed decisions based on their specific needs. This advanced analysis then organizes these vendors into four distinct quadrants, which represent varying levels of success: Forefront (F), Pathfinder (P), Niche (N), or Vital(V).

## Market Share Analysis:

The Market Share Analysis offers an insightful look at the current state of vendors in the Particle Size Analysis Market. By comparing vendor contributions to overall revenue, customer base, and other key metrics, we can give companies a greater understanding of their performance and what they are up against when competing for market share. The analysis also sheds light on just how competitive any given sector is about accumulation, fragmentation dominance, and amalgamation traits over the base year period studied.

## Key Company Profiles:

The report delves into recent significant developments in the Particle Size Analysis Market, highlighting leading vendors and their innovative profiles. These include 3P Instruments GmbH & Co. KG, Agilent Technologies, Inc., Anton Paar GmbH, Beckman Coulter, Inc. by Danaher Corporation, Bettersize Instruments Ltd., Brookhaven Instruments Corporation, Dandong HMKTest Instrument Co.,Ltd., FRITSCH GmbH, HORIBA, Ltd., InProcess-LSP BV, Izon Science Ltd., Jinan Winner Particle Instrument Stock Co., Ltd., LS Instruments AG, Malvern Panalytical Ltd. by Spectris PLC, Mettler Toledo International Inc., Micromeritics Instrument Corp., Microtrac Retsch GmbH, Shimadzu Corporation, Sympatec GmbH, TSI Incorporated, Waters Corporation, and Yokogawa Electric Corporation.

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Market Segmentation & Coverage:

This research report categorizes the Particle Size Analysis Market in order to forecast the revenues and analyze trends in each of following sub-markets:

Based on Technology, market is studied across Dynamic Light Scattering, Laser Diffraction, Nanoparticle Tracking Analysis, Resonant Mass Measurement, and Taylor Dispersion Analysis. The Taylor Dispersion Analysis is projected to witness significant market share during forecast period.

Based on Dispersion, market is studied across Dry Particle, Spray Particle, and Wet Particle. The Dry Particle is projected to witness significant market share during forecast period.

Based on End User, market is studied across Agriculture & Forestry, Chemicals, Food & Beverage, Mining, and Pharmaceuticals. The Food & Beverage is projected to witness significant market share during forecast period.

Based on Region, market is studied across Americas, Asia-Pacific, and Europe, Middle East & Africa. The Americas is further studied across Argentina, Brazil, Canada, Mexico, and United States. The United States is further studied across California, Florida, Illinois, New York, Ohio, Pennsylvania, and Texas. The Asia-Pacific is further studied across Australia, China, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. The Europe, Middle East & Africa is further studied across Denmark, Egypt, Finland, France, Germany, Israel, Italy, Netherlands, Nigeria, Norway, Poland, Qatar, Russia, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, and United Kingdom. The Americas commanded largest market share of 38.75% in 2022, followed by Europe, Middle East & Africa.

Key Topics Covered:

- 1. Preface
- 2. Research Methodology
- 3. Executive Summary
- 4. Market Overview
- 5. Market Insights
- 6. Particle Size Analysis Market, by Technology
- 7. Particle Size Analysis Market, by Dispersion
- 8. Particle Size Analysis Market, by End User

9. Americas Particle Size Analysis Market

10. Asia-Pacific Particle Size Analysis Market

11. Europe, Middle East & Africa Particle Size Analysis Market

12. Competitive Landscape

13. Competitive Portfolio

14. Appendix

The report provides insights on the following pointers:

1. Market Penetration: Provides comprehensive information on the market offered by the key players

2. Market Development: Provides in-depth information about lucrative emerging markets and analyzes penetration across mature segments of the markets

3. Market Diversification: Provides detailed information about new product launches, untapped geographies, recent developments, and investments

4. Competitive Assessment & Intelligence: Provides an exhaustive assessment of market shares, strategies, products, certification, regulatory approvals, patent landscape, and manufacturing capabilities of the leading players

5. Product Development & Innovation: Provides intelligent insights on future technologies, R&D activities, and breakthrough product developments

The report answers questions such as:

1. What is the market size and forecast of the Particle Size Analysis Market?

2. Which are the products/segments/applications/areas to invest in over the forecast period in the Particle Size Analysis Market?

3. What is the competitive strategic window for opportunities in the Particle Size Analysis Market?

4. What are the technology trends and regulatory frameworks in the Particle Size Analysis Market?

5. What is the market share of the leading vendors in the Particle Size Analysis Market?

6. What modes and strategic moves are considered suitable for entering the Particle Size Analysis Market?

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