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Soil Testing Equipment Market Forecasts to 2032 – Global Analysis By Type (Physical Tests, Chemical Tests, Residual Tests), Site Location (On-site, Laboratory-based), Degree of Automation, End User and By Geography

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Abstracts

According to Stratistics MRC, the Global Soil Testing Equipment Market is accounted for $6.9 billion in 2025 and is expected to reach $15.8 billion by 2032 growing at a CAGR of 12.4% during the forecast period. A variety of instruments and tools used to evaluate the physical and chemical characteristics of soil are referred to as soil testing equipment. These tools aid in the determination of variables like texture, permeability, compaction, nutrient availability, pH level, and moisture content. These technologies allow for the precise assessment of soil fertility, structure, and appropriateness for environmental, agricultural, and building projects by examining the composition of the soil. Penetrometers, augers, chemical test kits, and soil moisture testers are examples of common equipment. Equipment for evaluating soil is essential for sustainable development, crop yield, and land management.

Market Dynamics:

Driver:

Rising demand for precision agriculture

In order to minimise input costs and maximise crop yields, farmers look for precise soil data. Equipment for assessing soil offers crucial information about moisture, pH, and nutrient levels. By enabling site-specific farming decisions, this data increases productivity. The need for sophisticated testing instruments is increasing as agricultural

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technology use increases. As a result, producers adapt to the changing demands of precision farming.

Restraint:

High cost of advanced equipment

Agricultural enterprises and small farmers frequently lack the financial means to purchase such costly technology. Because of this, precision agricultural techniques are not widely used. Additionally, entrepreneurs and new competitors are deterred by hefty capital expenditures. Accessibility may be further diminished by the fact that government subsidies or financial help may not always cover the entire cost. Many potential users then turn to antiquated or manual techniques, which impedes the growth of technology as a whole.

Opportunity:

Government initiatives for sustainable farming

Farmers are encouraged to use testing instruments by subsidies and incentives for managing soil health. The need for precise soil analysis is growing as a result of initiatives supporting precision agriculture and organic farming. Regular soil testing is required by regulations for fertiliser management schemes. Campaigns for awareness and training increase farmers' understanding of the advantages of soil testing. All things considered, these programs foster an atmosphere that encourages market expansion.

Threat:

Lack of skilled personnel and awareness

A lack of qualified technicians and agronomists plagues many agricultural areas, particularly in emerging nations. The potential advantages of precision agriculture are diminished as a result of the underutilisation of the technology that is already available. Adoption is further hampered by farmers' and stakeholders' lack of understanding of the significance of soil health testing. Users are reluctant to trust or invest in these products if they lack the necessary information. As a result, inadequate outreach and implementation hamper market growth.

Covid-19 Impact

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The Covid-19 pandemic negatively impacted the Soil Testing Equipment Market due to disruptions in supply chains, limited workforce availability, and delayed agricultural and construction projects. Lockdowns and travel restrictions hindered equipment manufacturing, distribution, and on-site testing services. Reduced investments in infrastructure and farming activities further slowed market growth. However, the market gradually recovered as economic activities resumed and governments prioritized food security and sustainable land use, prompting renewed interest in soil testing for optimized agricultural productivity and environmental monitoring.

The physical tests segment is expected to be the largest during the forecast period

The physical tests segment is expected to account for the largest market share during the forecast period by providing essential data on soil texture, compaction, moisture content, and structure. These tests help determine the soil's suitability for various agricultural, construction, and environmental applications. Increasing demand for high crop yields and sustainable farming practices fuels the adoption of physical testing equipment. Construction and infrastructure projects also rely on physical soil tests to ensure foundational stability and safety. As precision agriculture and land assessment practices grow, the demand for accurate physical testing tools continues to rise.

The landscaping segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the landscaping segment is predicted to witness the highest growth rate, due to ensure optimal plant growth and turf management. Landscapers rely on soil testing to determine nutrient levels, pH balance, and soil composition before planting. This promotes the use of specialized testing equipment for accurate and efficient results. Increased urbanization and green space development have further boosted the need for advanced soil assessment tools. As a result, the landscaping industry's growth directly contributes to the rising adoption of soil testing equipment.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share due to rising agricultural modernization, government subsidies, and increasing awareness about soil health. Countries like India, China, and Australia are adopting precision farming practices, boosting the demand for portable and advanced testing tools. Rapid urbanization and industrialization are also driving soil contamination

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concerns, further pushing the market. Technological integration and local manufacturing support are key trends shaping the regional landscape.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to the high adoption of precision agriculture. The United States and Canada are investing heavily in sustainable farming practices, promoting the use of advanced soil testing equipment for nutrient and contamination analysis. The market benefits from strong research initiatives, a tech-savvy farming community, and collaborations between equipment manufacturers and agricultural institutions. Focus on improving crop yield and reducing environmental impact fuels consistent demand across the region.

Key players in the market

Some of the key players profiled in the Soil Testing Equipment Market include Agilent Technologies, Inc., Thermo Fisher Scientific Inc., Merck Group, PerkinElmer Inc., Controls S.p.A., LaMotte Company, Humboldt Mfg. Co., Gilson Company Inc., ELE International, Geotechnical Testing Equipment UK Ltd., Matest S.p.A., S.W. Cole, Eurofins Scientific, Martin Lishman Ltd., Sun Labtek Equipments (I) Pvt. Ltd., EIE Instruments Pvt. Ltd., Alfa Testing Equipment and Hanna Instruments, Inc.

Key Developments:

In July 2025, PerkinElmer announced a definitive agreement to acquire BioLegend in a cash-and-stock deal valued at approximately $5.25 billion. BioLegend’s strong portfolio in antibodies and reagents will expand PerkinElmer’s reach in life-sciences and diagnostics, including environmental and soil-testing applications.

In February 2024, Merck Group definitive agreement to buy Elanco’s aqua (fish) pharmaceuticals, vaccines, and nutrition unit for US $1.3 billion. Included two manufacturing plants (Canada, Vietnam) and a research site in Chile.

In November 2023, Thermo Fisher Scientific Inc. entered strategic collaboration with Flagship Pioneering to build new life-science platform companies, enhancing capabilities in bioplatform innovation. This bolsters overall analytical R&D strength.

Types Covered:

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Physical Tests

Chemical Tests

Residual Tests

Site Locations Covered:

On-site

Laboratory-based

Degree of Automations Covered:

Manual

Automatic

Semi-automatic

End Users Covered:

Agriculture

Construction

Landscaping

Forestry

Research & Laboratories

Environmental Agencies

Other End Users

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Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - Italy
  - France
  - Spain
  - Rest of Europe
- Asia Pacific
  - Japan
  - China
  - India
  - Australia
  - New Zealand
  - South Korea
  - Rest of Asia Pacific

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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
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- 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

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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

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

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