

Scintillator Market Report by Composition of Material (In-Organic Scintillators, Organic Scintillators), End Product (Personal or Pocket Size Instruments, Hand-Held Instruments, Fixed, Installed, and Automatic Instruments), Application (Healthcare, Nuclear Power Plants, Manufacturing Industries, Homeland Security and Defense, and Others), and Region 2024-2032

<https://marketpublishers.com/r/SF863F0B4F54EN.html>

Date: April 2024

Pages: 137

Price: US\$ 3,899.00 (Single User License)

ID: SF863F0B4F54EN

Abstracts

The global scintillator market size reached US\$ 565.9 Million in 2023. Looking forward, IMARC Group expects the market to reach US\$ 828.0 Million by 2032, exhibiting a growth rate (CAGR) of 4.2% during 2024-2032.

Scintillators refer to materials which can absorb high-energy photons and incident particles such as protons, electrons and neutrons. The common scintillator materials include inorganic and organic crystals, organic liquids, and noble and scintillating gases. They assist in converting the gathered energy into visible or ultraviolet range of photons which ensures detection by photomultipliers and photodiodes. Besides this, scintillators help in efficiently determining the energy and time of incident radiation. When compared to other types of radiation detectors, these materials are more sensitive to deposited energy and have a faster response time with simpler, reliable and cost-efficient construction and operation. As a result, they find vast applications in nuclear plants, medical imaging, manufacturing industries, high-energy particle experiments and national security.

In the healthcare industry, scintillators are used to detect and analyze cardiovascular and neurological diseases. With the increasing occurrence of these ailments, the demand for scintillators is increasing across the globe. Moreover, the governments

across the globe are implementing stringent regulations on the use of medical devices which, in turn, is pressurizing hospitals and healthcare organizations to adopt technologically advanced scintillation and radiation detectors. Additionally, these materials are used by security and defense organizations worldwide to tighten homeland security and avert human loss. For instance, the Department of Homeland Security (DHS) in the United States has been supporting the development of solid organic scintillators under the Exploratory Research and Small Business Innovative Research programs for detecting radioactive substances and preventing radiological threats.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global scintillator market report, along with forecasts at the global and regional level from 2024-2032. Our report has categorized the market based on composition of material, end product and application.

Breakup by Composition of Material:

- In-Organic Scintillators
 - Alkali Halides
 - Oxide Based Scintillators
 - Others
- Organic Scintillators
 - Single Crystal
 - Liquid Scintillators
 - Plastic Scintillators

Breakup by End Product:

- Personal or Pocket Size Instruments
- Hand-Held Instruments
- Fixed, Installed, and Automatic Instruments

Breakup by Application:

- Healthcare
- Nuclear Power Plants
- Manufacturing Industries
- Homeland Security and Defense

Others

Breakup by Region:

North America

Europe

Asia Pacific

Middle East and Africa

Latin America

Competitive Landscape:

The report has also analysed the competitive landscape of the market with some of the key players being Scintacor Ltd., Hamamatsu Photonics K.K., Proterial, Ltd. (Hitachi Ltd.), Ludlum Measurements Inc., Mirion Technologies Inc., Radiation Monitoring Devices Inc. (Dynasil Corporation of America), Rexon Components, Inc., Zecotek Photonics Inc., etc.

Key Questions Answered in This Report:

How has the global scintillator market performed so far and how will it perform in the coming years?

What are the key regional markets in the global scintillator industry?

What has been the impact of COVID-19 on the global scintillator industry?

What is the breakup of the market based on the composition of material?

What is the breakup of the market based on the application?

What is the breakup of the market based on the end product?

What are the various stages in the value chain of the global scintillator industry?

What are the key driving factors and challenges in the global scintillator industry?

What is the structure of the global scintillator industry and who are the key players?

What is the degree of competition in the global scintillator industry?

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