

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

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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?

Contents

1 PREFACE

2 SCOPE AND METHODOLOGY

- 2.1 Objectives of the Study
- 2.2 Stakeholders
- 2.3 Data Sources
 - 2.3.1 Primary Sources
 - 2.3.2 Secondary Sources
- 2.4 Market Estimation
 - 2.4.1 Bottom-Up Approach
 - 2.4.2 Top-Down Approach
- 2.5 Forecasting Methodology

3 EXECUTIVE SUMMARY

4 INTRODUCTION

- 4.1 Overview
- 4.2 Key Industry Trends

5 GLOBAL SCINTILLATOR MARKET

- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact of COVID-19
- 5.4 Market Breakup by Composition of Material
- 5.5 Market Breakup by End Product
- 5.6 Market Breakup by Application
- 5.7 Market Breakup by Region
- 5.8 Market Forecast

6 MARKET BREAKUP BY COMPOSITION OF MATERIAL

- 6.1 In-Organic Scintillators
 - 6.1.1 Market Trends
 - 6.1.2 Market Breakup by Type

- 6.1.2.1 Alkali Halides
 - 6.1.2.1.1 Market Trends
 - 6.1.2.1.2 Market Forecast
- 6.1.2.2 Oxide Based Scintillators
 - 6.1.2.2.1 Market Trends
 - 6.1.2.2.2 Market Forecast
- 6.1.2.3 Others
 - 6.1.2.3.1 Market Trends
 - 6.1.2.3.2 Market Forecast
- 6.1.3 Market Forecast
- 6.2 Organic Scintillators
 - 6.2.1 Market Trends
 - 6.2.2 Market Breakup by Type
 - 6.2.2.1 Single Crystal
 - 6.2.2.1.1 Market Trends
 - 6.2.2.1.2 Market Forecast
 - 6.2.2.2 Liquid Scintillators
 - 6.2.2.2.1 Market Trends
 - 6.2.2.2.2 Market Forecast
 - 6.2.2.3 Plastic Scintillators
 - 6.2.2.3.1 Market Trends
 - 6.2.2.3.2 Market Forecast
 - 6.2.3 Market Forecast

7 MARKET BREAKUP BY END PRODUCT

- 7.1 Personal or Pocket Size Instruments
 - 7.1.1 Market Trends
 - 7.1.2 Market Forecast
- 7.2 Hand-Held Instruments
 - 7.2.1 Market Trends
 - 7.2.2 Market Forecast
- 7.3 Fixed, Installed, and Automatic Instruments
 - 7.3.1 Market Trends
 - 7.3.2 Market Forecast

8 MARKET BREAKUP BY APPLICATION

- 8.1 Healthcare

- 8.1.1 Market Trends
- 8.1.2 Market Forecast
- 8.2 Nuclear Power Plants
 - 8.2.1 Market Trends
 - 8.2.2 Market Forecast
- 8.3 Manufacturing Industries
 - 8.3.1 Market Trends
 - 8.3.2 Market Forecast
- 8.4 Homeland Security and Defense
 - 8.4.1 Market Trends
 - 8.4.2 Market Forecast
- 8.5 Others
 - 8.5.1 Market Trends
 - 8.5.2 Market Forecast

9 MARKET BREAKUP BY REGION

- 9.1 North America
 - 9.1.1 Market Trends
 - 9.1.2 Market Forecast
- 9.2 Europe
 - 9.2.1 Market Trends
 - 9.2.2 Market Forecast
- 9.3 Asia Pacific
 - 9.3.1 Market Trends
 - 9.3.2 Market Forecast
- 9.4 Middle East and Africa
 - 9.4.1 Market Trends
 - 9.4.2 Market Forecast
- 9.5 Latin America
 - 9.5.1 Market Trends
 - 9.5.2 Market Forecast

10 SWOT ANALYSIS

- 10.1 Overview
- 10.2 Strengths
- 10.3 Weaknesses
- 10.4 Opportunities

10.5 Threats

11 VALUE CHAIN ANALYSIS

12 PORTERS FIVE FORCES ANALYSIS

12.1 Overview

12.2 Bargaining Power of Buyers

12.3 Bargaining Power of Suppliers

12.4 Degree of Competition

12.5 Threat of New Entrants

12.6 Threat of Substitutes

13 PRICE ANALYSIS

14 COMPETITIVE LANDSCAPE

14.1 Market Structure

14.2 Key Players

14.3 Profiles of Key Players

14.3.1 Scintacor Ltd

14.3.2 Hamamatsu Photonics K.K.

14.3.3 Proterial, Ltd. (Hitachi Ltd.)

14.3.4 Ludlum Measurements Inc.

14.3.5 Mirion Technologies Inc.

14.3.6 Radiation Monitoring Devices Inc. (Dynasil Corporation of America)

14.3.7 Rexon Components, Inc.

14.3.8 Zecotek Photonics Inc.

List Of Tables

LIST OF TABLES

Table 1: Global: Scintillator Market: Key Industry Highlights, 2023 and 2032

Table 2: Global: Scintillator Market Forecast: Breakup by Composition of Material (in Million US\$), 2024-2032

Table 3: Global: Scintillator Market Forecast: Breakup by End Product (in Million US\$), 2024-2032

Table 4: Global: Scintillator Market Forecast: Breakup by Application (in Million US\$), 2024-2032

Table 5: Global: Scintillator Market Forecast: Breakup by Region (in Million US\$), 2024-2032

Table 6: Global: Scintillator Market Structure

Table 7: Global: Scintillator Market: Key Players

List Of Figures

LIST OF FIGURES

Figure 1: Global: Scintillator Market: Major Drivers and Challenges

Figure 2: Global: Scintillator Market: Sales Value (in Million US\$), 2018-2023

Figure 3: Global: Scintillator Market: Breakup by Composition of Material (in %), 2023

Figure 4: Global: Scintillator Market: Breakup by End Product (in %), 2023

Figure 5: Global: Scintillator Market: Breakup by Application (in %), 2023

Figure 6: Global: Scintillator Market: Breakup by Region (in %), 2023

Figure 7: Global: Scintillator Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 8: Global: Scintillator Industry: SWOT Analysis

Figure 9: Global: Scintillator Industry: Value Chain Analysis

Figure 10: Global: Scintillator Industry: Porter's Five Forces Analysis

Figure 11: Global: Scintillator (In-Organic) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 12: Global: Scintillator (In-Organic) Market: Breakup by Type (in %), 2023

Figure 13: Global: Scintillator (Alkali Halides) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 14: Global: Scintillator (Alkali Halides) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 15: Global: Scintillator (Oxide Based Scintillators) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 16: Global: Scintillator (Oxide Based Scintillators) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 17: Global: Scintillator (Others) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 18: Global: Scintillator (Others) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 19: Global: Scintillator (In-Organic) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 20: Global: Scintillator (Organic) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 21: Global: Scintillator (Organic) Market: Breakup by Type (in %), 2023

Figure 22: Global: Scintillator (Single Crystal) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 23: Global: Scintillator (Single Crystal) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 24: Global: Scintillator (Liquid Scintillators) Market: Sales Value (in Million US\$),

2018 & 2023

Figure 25: Global: Scintillator (Liquid Scintillators) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 26: Global: Scintillator (Plastic Scintillators) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 27: Global: Scintillator (Plastic Scintillators) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 28: Global: Scintillator (Organic) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 29: Global: Scintillator (Personal or Pocket Size Instruments) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 30: Global: Scintillator (Personal or Pocket Size Instruments) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 31: Global: Scintillator (Hand-Held Instruments) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 32: Global: Scintillator (Hand-Held Instruments) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 33: Global: Scintillator (Fixed, Installed, and Automatic Instruments) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 34: Global: Scintillator (Fixed, Installed, and Automatic Instruments) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 35: Global: Scintillator (Healthcare) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 36: Global: Scintillator (Healthcare) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 37: Global: Scintillator (Nuclear Power Plants) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 38: Global: Scintillator (Nuclear Power Plants) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 39: Global: Scintillator (Manufacturing Industries) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 40: Global: Scintillator (Manufacturing Industries) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 41: Global: Scintillator (Homeland Security and Defense) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 42: Global: Scintillator (Homeland Security and Defense) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 43: Global: Scintillator (Other Applications) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 44: Global: Scintillator (Other Applications) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 45: North America: Scintillator Market: Sales Value (in Million US\$), 2018 & 2023

Figure 46: North America: Scintillator Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 47: Europe: Scintillator Market: Sales Value (in Million US\$), 2018 & 2023

Figure 48: Europe: Scintillator Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 49: Asia Pacific: Scintillator Market: Sales Value (in Million US\$), 2018 & 2023

Figure 50: Asia Pacific: Scintillator Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 51: Middle East and Africa: Scintillator Market: Sales Value (in Million US\$), 2018 & 2023

Figure 52: Middle East and Africa: Scintillator Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 53: Latin America: Scintillator Market: Sales Value (in Million US\$), 2018 & 2023

Figure 54: Latin America: Scintillator Market Forecast: Sales Value (in Million US\$), 2024-2032

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