+357 96 030922
info@marketpublishers.com

Global Bromine-77 Supply, Demand and Key Producers, 2026-2032

https://marketpublishers.com/r/G7BA2C91D2A7EN.html
Date: August 2026
Pages: 83
Price: US$ 4,480.00 (Single User License)
ID: G7BA2C91D2A7EN

Abstracts

The global Bromine-77 market size is expected to reach $ million by 2032, rising at a market growth of %CAGR during the forecast period (2026-2032).

In 2025, global production of bromine-77 was approximately 37 grams, with an average global market price of about US$44,000 per gram. Total global production capacity of bromine-77 reached approximately 65 grams in 2025. The industry average gross profit margin for this product was approximately 62%. Bromine-77 (^77Br) is an artificially produced radioactive isotope of bromine with an atomic number of 35 and a mass number of 77. Unlike naturally occurring stable bromine isotopes (^79Br and ^81Br), Bromine-77 is mainly produced through nuclear reactions, such as irradiation of enriched Selenium-77 (^77Se) targets with proton beams or other accelerated particles. With a moderate half-life of approximately 57 hours, Bromine-77 undergoes electron capture decay and emits characteristic gamma radiation, making it valuable for nuclear medicine research, radiopharmaceutical development, isotope tracing, and fundamental radiochemistry studies. Due to its relatively short half-life and limited production and transportation window, Bromine-77 is considered a specialized, low-volume, high-technology radioactive isotope product.

The upstream segment of the Bromine-77 industry mainly includes isotope production materials, nuclear reaction targets, accelerator facilities, and nuclear infrastructure suppliers. Key raw materials include high-purity Selenium-77 targets, enriched selenium isotopes, and related chemical reagents. The availability of enriched Selenium-77 directly influences Bromine-77 production capacity. Production typically relies on cyclotrons, research reactors, or other nuclear reaction facilities, followed by radiochemical separation, purification, and quality testing processes to obtain research-grade Bromine-77. Due to strict regulations regarding radioactive isotope production

+357 96 030922
info@marketpublishers.com

licenses, nuclear facility operation, and specialized technical expertise, the upstream supply chain has significant entry barriers, with only a limited number of global facilities capable of stable production. The midstream segment mainly covers radioactive isotope production, radiochemical separation, purification, quality control, and specialized packaging and transportation services. Producers and research institutions typically supply Bromine-77 in different activity levels and chemical forms, such as bromide solutions, radiolabeling precursors, or customized research samples. Because of its short half-life, midstream suppliers must have rapid production capabilities, efficient quality testing procedures, and specialized radioactive logistics systems to ensure timely delivery. The main value creation areas include nuclear reaction optimization, radiochemical processing technology, radioactive purity control, and compliance with international radioactive material transportation standards. The downstream applications of Bromine-77 mainly focus on nuclear medicine research, radiopharmaceutical development, molecular imaging, and life science studies. In nuclear medicine, Bromine-77 can serve as a radioactive tracer for studying drug distribution, metabolic pathways, and biological molecular behavior, while also supporting the development of new radiopharmaceutical candidates. In addition, Bromine-77 is used in radiochemistry, nuclear physics experiments, and isotope labeling research. With the continued development of targeted radiotherapy, precision medicine, and advanced nuclear medicine technologies, demand for specialized radionuclides is expected to increase. As a research-oriented radionuclide with unique nuclear characteristics, Bromine-77 is expected to maintain steady growth driven primarily by scientific research and pharmaceutical innovation.

The primary growth drivers of the Bromine-77 industry come from the continuous expansion of nuclear medicine and radiopharmaceutical research. With the rapid development of precision medicine, molecular imaging, and targeted therapies, global demand for specialized radionuclides continues to increase. Due to its unique decay characteristics and chemical labeling capabilities, Bromine-77 can be used as a radioactive tracer to study drug distribution, metabolic pathways, and biological mechanisms, while also supporting the development of novel radiopharmaceutical candidates. The shift toward personalized and precision-based cancer diagnosis and treatment has encouraged research institutions and pharmaceutical companies to increase investment in specialized radionuclide resources.

Advances in radioactive isotope production technologies represent a key factor supporting the development of Bromine-77. Production of Bromine-77 relies mainly on enriched Selenium-77 target materials and nuclear reaction facilities such as cyclotrons. Its supply capability is influenced by target preparation, irradiation efficiency,

+357 96 030922
info@marketpublishers.com

radiochemical separation, and quality control technologies. With increasing investment in medical isotope production infrastructure, wider deployment of advanced cyclotrons, and improvements in automated radiochemistry systems, the production efficiency and quality consistency of Bromine-77 continue to improve. Meanwhile, stronger collaboration among nuclear medicine centers worldwide is enhancing the supply capability of short-lived radionuclides.

In the future, the Bromine-77 industry is expected to develop as a small-volume, high-value, application-driven isotope market. Due to its relatively short half-life, Bromine-77 is unlikely to develop into a large-scale inventory-based commodity and will continue to rely on project-based demand, preclinical research, and customized supply models. Future growth opportunities will mainly come from innovative radiopharmaceutical development, targeted radionuclide therapy (TRT), molecular probe research, and fundamental nuclear medicine studies. As new therapeutic targets continue to emerge, demand for specialized radioactive labeling materials with unique nuclear properties is expected to increase.

This report studies the global Bromine-77 production, demand, key manufacturers, and key regions.

This report is a detailed and comprehensive analysis of the world market for Bromine-77 and provides market size (US$ million) and Year-over-Year (YoY) Growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of Bromine-77 that contribute to its increasing demand across many markets.

Highlights and key features of the study

Global Bromine-77 total production and demand, 2021-2032, (Gram)
Global Bromine-77 total production value, 2021-2032, (USD Million)
Global Bromine-77 production by region & country, production, value, CAGR, 2021-2032, (USD Million) & (Gram), (based on production site)
Global Bromine-77 consumption by region & country, CAGR, 2021-2032 & (Gram)
U.S. VS China: Bromine-77 domestic production, consumption, key domestic manufacturers and share
Global Bromine-77 production by manufacturer, production, price, value and market share 2021-2026, (USD Million) & (Gram)
Global Bromine-77 production by Type, production, value, CAGR, 2021-2032, (USD Million) & (Gram)

+357 96 030922
info@marketpublishers.com

Global Bromine-77 production by Application, production, value, CAGR, 2021-2032, (USD Million) & (Gram)

This report profiles key players in the global Bromine-77 market based on the following parameters - company overview, production, value, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include NIDC(DOE IP), Rosatom, Trace Sciences, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the World Bromine-77 market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US$ Millions), volume (production, consumption) & (Gram) and average price (US$/g) by manufacturer, by Type, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

Global Bromine-77 Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

+357 96 030922
info@marketpublishers.com

Global Bromine-77 Market, Segmentation by Type:

Solution

Solid Target

Global Bromine-77 Market, Segmentation by Radioactivity:

Low Activity Bromine-77

Medium Activity Bromine-77

High Activity Bromine-77

Global Bromine-77 Market, Segmentation by Chemical Form:

Bromine-77 Bromide

Organobromine-77 Compounds

Bromine-77 Radiopharmaceutical Precursors

Global Bromine-77 Market, Segmentation by Production Technology Route:

Selenium-77 Proton Bombardment Production

Alternative Nuclear Reaction Production

Reactor-Based Production

Global Bromine-77 Market, Segmentation by Application:

Imaging Agent

+357 96 030922
info@marketpublishers.com

Disease Treatment

Companies Profiled:

NIDC(DOE IP)

Rosatom

Trace Sciences

Key Questions Answered:
1. How big is the global Bromine-77 market?
2. What is the demand of the global Bromine-77 market?
3. What is the year over year growth of the global Bromine-77 market?
4. What is the production and production value of the global Bromine-77 market?
5. Who are the key producers in the global Bromine-77 market?
6. What are the growth factors driving the market demand?

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

4 UNITED STATES VS CHINA VS REST OF THE WORLD

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Global Bromine-77 Supply, Demand and Key Producers, 2026-2032

Product link: https://marketpublishers.com/r/G7BA2C91D2A7EN.html

Price: US$ 4,480.00 (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/G7BA2C91D2A7EN.html