

High Purity Carbon Dioxide Market Trends 2025-2029: Regional Outlook and Sizing Analysis

The Business Research Company's High Purity Carbon Dioxide Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

LONDON, GREATER LONDON, UNITED KINGDOM, December 1, 2025

/EINPresswire.com/ -- [High Purity Carbon Dioxide Market](#) Growth

Forecast: What To Expect By 2025?

The market for high purity carbon dioxide has seen robust growth in the past few years. The market is projected to expand from \$6.41 billion in 2024 to \$6.86 billion in 2025, showing a compound annual growth rate (CAGR) of 7.0%. The growth during the historic period is driven by

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factors such as the escalating demand for carbonation in food and beverages, increased usage of high purity gas in pharmaceutical processing and packaging, growing need for regulated environments in laboratory applications, a global upswing in beverage bottling and preservation activities, stricter enforcement of purity standards in industrial gases, and the growing trend of using controlled atmosphere storage for fruits and vegetables.

In the coming years, the market size for high purity carbon dioxide is projected to experience substantial growth, reaching \$8.87 billion in 2029 with a compound annual

growth rate (CAGR) of 6.6%. The growth during this forecast period is tied to increasing factors such as the consumption of packaged and carbonated drinks in developing economies, greater investment in healthcare and clinical research facilities, increased demand for carbon dioxide in precision food freezing and chilling, expansion in beverage export activities that require high purity packaging gas, growth of pharmaceutical manufacturing in emerging regions, and a growing consumer preference for premium beverages that demand superior carbonation quality. Notable trends projected for this period include progress in technologies for impurity

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elimination and gas purification systems, improvements in highly efficient liquefaction and storage methods, advancements in monitoring purity and ongoing quality control systems, the rise of modular purification plants for immediate supply, sustained R&D in purification and process technologies, and inventions in energy-saving gas recapture and recycling systems.

Download a free sample of the high purity carbon dioxide market report:

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What Are Key Factors Driving The Demand In The Global High Purity Carbon Dioxide Market?

In the coming years, the market size for high purity carbon dioxide is projected to experience substantial growth, reaching \$8.87 billion in 2029 with a compound annual growth rate (CAGR) of 6.6%. The growth during this forecast period is tied to increasing factors such as the consumption of packaged and carbonated drinks in developing economies, greater investment in healthcare and clinical research facilities, increased demand for carbon dioxide in precision food freezing and chilling, expansion in beverage export activities that require high purity packaging gas, growth of pharmaceutical manufacturing in emerging regions, and a growing consumer preference for premium beverages that demand superior carbonation quality. Notable trends projected for this period include progress in technologies for impurity elimination and gas purification systems, improvements in highly efficient liquefaction and storage methods, advancements in monitoring purity and ongoing quality control systems, the rise of modular purification plants for immediate supply, sustained R&D in purification and process technologies, and inventions in energy-saving gas recapture and recycling systems.

Who Are The Leading Players In The High Purity Carbon Dioxide Market?

Major players in the High Purity Carbon Dioxide Global Market Report 2025 include:

- BASF SE
- Linde plc
- Air Liquide SA
- Air Products and Chemicals, Inc.
- Nippon Sanso Holdings
- Air Water Incorporated
- Iwatani Corporation
- Messer Group GmbH
- SOL Group SpA
- Gulf Cryo Holding KSCC

What Are The Key Trends Shaping The High Purity Carbon Dioxide Industry?

Leading corporations in the high purity carbon dioxide market are striving to improve product quality, storage capacity, and extensive distribution abilities by introducing technology advancements such as cryogenic liquefaction. This cutting-edge procedure cools purified carbon dioxide to incredibly low temperatures under managed pressure situations, turning it into a liquid form while discarding non-condensable impurities. This process ascertains high-purity preservation, safe transportation, and lasting storage. For example, Gulf Cryo, an industrial and

medical gases producer based in the UAE, collaborated with RAK Ceramics, a UAE-based ceramics manufacturer, to inaugurate the nation's first high-purity carbon dioxide (CO₂) capture facility in October 2025. This facility, which relies on cryogenic liquefaction, aims to capture, cleanse, and liquefy carbon dioxide from industrial waste streams for commercial use. This facility enhances the stable supply of food-grade liquid CO₂ and fosters decarbonization by facilitating carbon capture and use.

Analysis Of Major Segments Driving The [High Purity Carbon Dioxide Market Growth](#)

The high purity carbon dioxide market covered in this report is segmented –

- 1) By Source: Industrial Fermentation, Natural Gas Processing, Ethanol Production, Ammonia Production, Other Sources
- 2) By Source Of Production: Natural Carbon Dioxide, Industrial Carbon Dioxide
- 3) By Delivery Mode: Bulk Delivery, Cylinders, Microbulk Delivery, On-Site Generation
- 4) By Application: Pharmaceutical Industry, Food And Beverage Industry, Industrial Applications, Electronics Manufacturing, Laboratory And Research Applications
- 5) By End-User: Healthcare, Food And Beverage, Electronics, Chemicals, Other End-Users

Subsegments:

- 1) By Industrial Fermentation: Beverage Manufacturing, Bioethanol Production, Dairy Fermentation, Pharmaceutical Fermentation, Food Ingredient Fermentation, Yeast And Enzyme Manufacturing
- 2) Natural Gas Processing: Membrane Separation, Amine Treatment, Cryogenic Gas Separation, Pressure Swing Adsorption, Activated Carbon Filtration
- 3) By Ethanol Production: Corn Based Ethanol Production, Sugarcane Based Ethanol Production, Cellulosic Ethanol Production, Molasses Based Ethanol Production, Sorghum Based Ethanol Production
- 4) By Ammonia Production: Steam Methane Reforming, Partial Oxidation Process, Autothermal Reforming, Coal Gasification, Biogas Based Ammonia Production
- 5) By Other Sources: Biogas Upgrading, Cement Manufacturing, Petrochemical Refining, Steel Manufacturing, Waste To Energy Plants

View the full high purity carbon dioxide market report:

<https://www.thebusinessresearchcompany.com/report/high-purity-carbon-dioxide-global-market-report>

Which Region Is Expected To Lead The High Purity Carbon Dioxide Market By 2025?

In 2024, North America led the global market for high purity carbon dioxide. It's forecasted that Asia-Pacific will witness the quickest growth in the ensuing period. The report on the high purity carbon dioxide market includes regions such as Asia-Pacific, Western Europe, Eastern Europe, North America, South America, Middle East, and Africa.

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