

# Flow Chemistry Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2022-2027

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## Abstracts

The global flow chemistry market size reached US\$ 1.5 Billion in 2021. Looking forward, IMARC Group expects the market to reach US\$ 2.9 Billion by 2027, exhibiting a growth rate (CAGR) of 11.11% during 2022-2027. Keeping in mind the uncertainties of COVID-19, we are continuously tracking and evaluating the direct as well as the indirect influence of the pandemic on different end use industries. These insights are included in the report as a major market contributor.

Flow chemistry refers to the process of performing chemical reactions between reactive compounds in a single flowing stream. It is commonly used for hydrogenation, oxidation, halogenation and diazotization reactions. The compounds are pumped together in the vessel and flowed through a temperature-controlled pipe, chamber or microreactor. The steam generated from the reaction is collected to obtain the resultant compound, which is then directed to subsequent flow reactor loops to generate the desired product. In comparison to the traditionally used batch reactors, flow chemistry provides faster, safer and scalable reactions and cleaner products. As a result, it finds extensive applications across various industries, including pharmaceutical, chemical and petrochemical.

### Flow Chemistry Market Trends:

Significant growth in the chemical industry across the globe is one of the key factors creating a positive outlook for the market. Flow chemistry is commonly used to produce bulk chemicals as it provides enhanced control over mass and heat transfer rates, laminar flow conditions and high volumetric productivity. Moreover, the widespread adoption of microreactors in the pharmaceutical industry is providing a thrust to the market growth. These reactors are compact and offer safe processing conditions for highly toxic and hazardous reactions. In line with this, flow chemistry is also utilized to

synthesize various petrochemicals, including ethane, benzene, ethylene and methane. Additionally, various technological advancements, such as the development of highly automated flow synthesis systems integrated with machine learning (ML) and next-generation sustainable manufacturing solutions, are acting as other growth-inducing factors. These technologies aid in maintaining a continuous flow and preventing any blockages in the process. Other factors, including extensive research and development (R&D) activities, along with the implementation of favorable government policies promoting the use of biofuels, are anticipated to drive the market toward growth.

#### Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global flow chemistry market report, along with forecasts at the global, regional and country level from 2022-2027. Our report has categorized the market based on reactor and application.

#### Breakup by Reactor:

- Continuous Stirred Tank Reactor
- Plug Flow Reactor
- Microreactor
- Microwave System
- Others

#### Breakup by Application:

- Pharmaceuticals
- Chemicals
- Academia and Research
- Petrochemicals
- Others

#### Breakup by Region:

- North America
  - United States
  - Canada
- Asia-Pacific
- China

Japan  
India  
South Korea  
Australia  
Indonesia  
Others  
Europe  
Germany  
France  
United Kingdom  
Italy  
Spain  
Russia  
Others  
Latin America  
Brazil  
Mexico  
Others  
Middle East and Africa

#### Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being AM Technology, Chemtrix BV, Corning Incorporated, Ehrfeld Mikrotechnik GmbH, FutureChemistry Holding B.V., HEL Ltd., Lonza Group AG, Milestone Srl (Koch Media GmbH), Parr Instruments Company, Syrris Ltd (Asahi Glassplant Inc.) and ThalesNano Inc.

#### Key Questions Answered in This Report

1. What was the size of the global flow chemistry market in 2021?
2. What is the expected growth rate of the global flow chemistry market during 2022-2027?
3. What has been the impact of COVID-19 on the global flow chemistry market?
4. What are the key factors driving the global flow chemistry market?
5. What is the breakup of the global flow chemistry market based on the reactor?
6. What is the breakup of the global flow chemistry market based on the application?
7. What are the key regions in the global flow chemistry market?
8. Who are the key players/companies in the global flow chemistry market?

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