

Asia Pacific Enzymatic DNA Synthesis Market Forecast to 2028 -Regional Analysis by Product Type (Custom DNA Synthesis and DNA Library Synthesis), Application (Synthetic Biology, Genetic Engineering, Therapeutic Antibodies, Vaccine Design, and Others), Technology (SOLA, CRISPR, PCR, and Others), and End User (Academic & Research Institutes, Biotech & Pharmaceutical Companies, Diagnostic Laboratories, and Others)

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- Single User Price \$3000.00
- Site Price \$4000.00
- Enterprise Price \$5000.00

Report description:

The Asia Pacific enzymatic DNA synthesis market is expected to grow from US\$ 29.18 million in 2022 to US\$ 301.49 million by 2028. It is estimated to record a CAGR of 47.6% from 2022 to 2028.

Growing Demand for Enzymatic DNA Synthesis Procedure Fuels Asia Pacific Enzymatic DNA Synthesis Market Growth

Enzymatic approaches are the most attractive and are scalable, stereospecific, and environmentally benign. Enzymes can mediate mismatch recognition, enabling selective annealing of complementary strands, reducing the number of steps in each elongation cycle by eliminating the need for coupling reagents, and lowering the dependence on organic solvents. The enzymatic synthesis is inherently simpler than the chemical alternative and has the crucial potential to be much more precise than the chemical approach, introducing fewer errors into the code. This makes it possible to produce much longer sequences without causing cumbersome, inefficient, costly cleanups or workarounds. Several start-up companies and academic institutes are developing novel enzyme-based DNA synthesis technologies, which are believed to be the first breakthrough in DNA synthesis technology in ~40 years. These methods would significantly reduce costs and production time.

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As several enzyme companies are now active in the enzymatic DNA synthesis space, different business models have emerged with an increasing focus on DNA assembly and benchtop printers, creating opportunities for the enzymatic DNA synthesis market. DNA Script offers the Syntax instrument as a benchtop DNA synthesizer in a similar size as a HiSeq sequencer developed by Illumina. This synthesizer can generate 60 bp oligonucleotides in pure form for immediate use within 6 hours. In addition, the next generation of on-demand DNA synthesizers is likely to provide unprecedented accuracy, scalability, and speed, democratizing access to this technology and realizing the full promise of synthetic DNA to accelerate the development of tomorrow's medicine. These projected developments in the DNA synthesis landscape are expected open new opportunities for companies operating in the enzymatic DNA synthesis market.

Asia Pacific Enzymatic DNA Synthesis Market Overview

The Asia Pacific enzymatic DNA synthesis market is segmented into Japan, China, India, South Korea, Australia, and the Rest of Asia Pacific. Asia Pacific (APAC) is seeing significant growth in genomics research and increasing demand for synthetic biology tools. Increasing support for biological research and drug discovery propels the demand for a steady supply of synthetic nucleotides for utility in research exercises. Numerous ongoing research studies at the research centers across the region and emerging market players positively impact the market's growth. Moreover, the increase in the investments and developments of innovative solutions by the market leaders are responsible for the Asia Pacific enzymatic DNA synthesis market growth.

Asia Pacific Enzymatic DNA Synthesis Market Revenue and Forecast to 2028 (US\$ Million)

Asia Pacific Enzymatic DNA Synthesis Market Segmentation

The Asia Pacific enzymatic DNA synthesis market is segmented into product type, application, technology, end user, and country.

Based on product type, the Asia Pacific enzymatic DNA synthesis market is segmented into custom DNA synthesis and DNA library synthesis. The DNA library synthesis segment held a larger share of the Asia Pacific enzymatic DNA synthesis market in 2022.

Based on application, the Asia Pacific enzymatic DNA synthesis market is segmented into synthetic biology, genetic engineering, therapeutic antibodies, vaccine design, and others. The synthetic biology segment held the largest share of the Asia Pacific enzymatic DNA synthesis market in 2022.

Based on technology, the Asia Pacific enzymatic DNA synthesis market is segmented into SOLA, CRISPR, PCR, and others. The PCR segment held the largest share of the Asia Pacific enzymatic DNA synthesis market in 2022.

Based on end user, the Asia Pacific enzymatic DNA synthesis market is segmented into academic & research institutes, biotech & pharmaceutical companies, diagnostic laboratories, and others. The biotech and pharmaceutical companies segment held the largest share of the Asia Pacific enzymatic DNA synthesis market in 2022

Based on country, the Asia Pacific enzymatic DNA synthesis market is segmented into China, Japan, India, Australia, South Korea, and the Rest of Asia Pacific. China dominated the share of the Asia Pacific enzymatic DNA synthesis market in 2022.

DNA Script; GenScript Biotech Corporation; Synbio Technologies; Touchlight; and Twist Bioscience are the leading companies operating in the Asia Pacific enzymatic DNA synthesis market.

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