

Australia Life Science Tools Market Assessment, By Type [Instruments, Consumables, Services], By **Technology [Genomics, Proteomics, Cell Biology** Technology, Lab Supplies, Others], By Product [Cell **Culture Systems & 3D Cell Culture, Liquid** Chromatography, Mass Spectrometry, Flow Cytometry, Cloning & Genome Engineering, Microscopy & Electron Microscopy, Next Generation Sequencing, PCR & qPCR, Nucleic Acid Preparation, Nucleic Acid Microarray, Sanger Sequencing, Transfection Device & Gene Delivery Technologies, Nuclear Magnetic Resonance, Others], By End-user [Healthcare, Government & Academic Institutions, **Biopharmaceutical Company, Industrial Applications,** Others], By Region, Opportunities and Forecast, 2016-2030F.

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# **Abstracts**

Australia Life Science Tools market size was valued at USD 3.56 billion in 2022 which is expected to reach USD 8.19 billion in 2030 with a CAGR of 10.97% for the forecast period between 2023 and 2030. The life science tool market in Australia is experiencing a consistent growth in demand attributed to factors like increasing adoption of life sciences tools, increasing geriatric population, and an increasing prevalence of chronic



diseases. These factors are contributing to the demand for advanced research and diagnostic tools.

To ensure precision, dependability, and safety, life science tools are subject to rigorous regulations and quality standards. Compliance with these regulatory requirements is of utmost importance for manufacturers and distributors of life science tools in Australia. They place significant emphasis on upholding high-quality standards and obtaining the requisite certifications to meet the necessary compliance measures. To promote scientific progress, both the Australian government and private organizations have made substantial investments in research and development (R&D) projects. This increased funding for R&D has played a crucial role in bolstering the demand for life science tools, particularly in fields like genomics, proteomics, and drug discovery.

# Rapid Growth in Biotechnology Sector

The biotechnology sector in Australia has witnessed substantial expansion, leading to an increased demand for life science tools. This growth spans various areas within the biotechnology industry, including pharmaceuticals, medical devices, agricultural biotechnology, and bioinformatics. Consequently, this expansion has generated favorable prospects for companies involved in providing life science tools and services. Australia has become a leading force in biotechnology and pharmaceutical innovation due to its outstanding research facilities, top-notch scientists, and regulatory framework that is both robust and adaptable. The Economist Intelligence Unit (EIU), in its assessment of various industry factors such as clinical trials, intellectual property system, regulations, business environment, and investment opportunities, recognizes Australia as highly competitive in the field of biotechnology.

The biotechnology sector in Australia is experiencing significant growth, with a remarkable increase of over 40% within a span of two years. Moreover, the market capitalization of biotech companies listed on the Australian Securities Exchange (ASX) has surged by nearly AUD16 billion in just six months.

#### **Technological Advancements**

Australia's life science tools market has witnessed significant several technological advancements in recent years. These advancements have revolutionized research and diagnostics across various domains, including genomics, proteomics, molecular biology, and clinical diagnostics. Next-generation sequencing (NGS) technologies have gained prominence, enabling rapid and cost-effective DNA and RNA sequencing. High-



throughput screening platforms have improved the efficiency of drug discovery processes. Automation and robotics have streamlined laboratory workflows, increasing throughput and accuracy. Additionally, advancements in imaging technologies, such as confocal microscopy and flow cytometry, have facilitated detailed cellular analysis. The integration of artificial intelligence (AI) and machine learning (ML) algorithms has enhanced data analysis, enabling researchers to extract meaningful insights from large datasets. Moreover, there has been a growing focus on developing portable and point-of-care devices, enabling on-site diagnostics. These technological advancements have propelled the life science tools market in Australia, supporting groundbreaking research and improving healthcare outcomes.

A specific example of technological advancement in the Australian life science tools market occurred in August 2021 when SpeeDx Pty., Ltd. obtained clearance from the Australian Therapeutic Goods Administration for their PlexPCR SARS-CoV-2 test. This test, designed to enable rapid response in managing the virus, is well-matched with the SpeeDx PlexPrep robotics system.

Innovations in Microscopy for Improved Treatments

Australia has made significant advancements in the field of microscopy, including electron microscopy. The Australian government has established world-class facilities, such as Microscopy Australia, that have played a crucial role in pushing the boundaries of imaging technologies. Microscopy Australia has been at the forefront of developing innovative techniques and tools to enhance microscopy capabilities. These advancements have enabled researchers to delve deeper into the microscopic world and gain unprecedented insights into various scientific disciplines. Australian researchers have contributed to the development of advanced electron microscopy techniques, such as transmission electron microscopy (TEM) and scanning electron microscopy (SEM).

For instance, researchers have achieved a significant breakthrough at Microscopy Australia's facilities by developing a novel technique termed as "correlative microscopy" for improved tuberculosis treatments that enables them to visualize the presence of tuberculosis bacteria and antibiotics inside cells. This advancement holds immense promise for the future development of patient-centered therapeutic alternatives.

Genomics and Proteomics Witnessing Significant Growth and Expansion

Genomics and proteomics are rapidly growing fields in the life science tools market. The



country has witnessed significant advancements and initiatives in these areas, which have contributed to the overall progress of life science research.

In genomics, Australia has made notable strides in DNA sequencing technologies and associated tools. High-throughput sequencing platforms and innovative genomic analysis methods have enabled researchers to decipher the genetic makeup of various organisms, including humans, animals, plants, and microorganisms. Similarly, proteomics has gained considerable attention in Australia's life science tool market. Australia has witnessed advancements in mass spectrometry technologies, protein separation techniques, and bioinformatics tools, enabling researchers to dive deeper into the complexities of the proteome. These developments have facilitated discoveries in areas such as disease biomarker identification, drug target validation, and understanding of protein-protein interactions.

The Australian Proteomics Society (APS) plays a vital role in supporting and advancing proteomics research and related subjects in Australia and New Zealand. Its membership consists of professionals from government, industry, and academic laboratories.

### **Government Initiatives**

The Australian government has fostered a culture of innovation and investment in medical research, positioning the country as a hub for cutting-edge medical procedures and life-saving medications. A key focus for the government is the development of a thriving biotechnology sector that garners international attention. To facilitate this, the government has established the Medical Research Future Fund (MRFF) with a substantial budget of nearly USD 13.34 billion (AUD 20 billion AUD), aimed at revolutionizing health and medical research and promoting innovation. To further support the growth of the life sciences industry, AusBiotech has introduced a directory of accelerators and incubators tailored to early-stage Australian life sciences companies. The government is offering significant assistance, including a generous R&D tax offset of up to 43.5% and over USD 14.34 billion (AUD 21.5 billion) in support funds for the life sciences sector. In 2023, a new incubator program funded by the Australian government will be launched, allocating USD 33.36 million (AUD 50 million) for grants of up to USD 3.3 million (AUD 5 million) to emerging biomedical and digital health companies. This program aims to provide crucial support to these companies during their early stages of development.

Impact of COVID-19



The market experienced unprecedented growth during the pandemic due to the impact of COVID-19. The sudden outbreak of the virus resulted in a surge in demand for in vitro diagnostics, prompting the Australian government to address the population's needs. In November 2022, the Therapeutic Goods Administration (TGA) collaborated with IVD suppliers to ensure the availability of tests for managing the pandemic. The TGA specifically prioritized COVID-19 tests, including rapid antigen tests, throughout 2022, focusing on tests that could detect both the influenza virus and COVID-19. These measures, along with the government's emphasis on COVID-19 testing, significantly influenced the market's growth during the pandemic. Furthermore, the market for in vitro diagnostics is expected to remain strong in the post-pandemic period due to the emergence of SARS-CoV-2 mutant strains, thereby contributing to its growth in the forecast period.

## Key Players Landscape and Outlook

The Australian life science tools market is characterized by the presence of several key players who contribute to its landscape and influence its outlook. These key players encompass a diverse range of companies, research institutions, and academic organizations that are involved in the development, manufacturing, and distribution of life science tools and technologies. Government of Australia is providing support in the form of grants and incubator programs for early-stage and well-established organizations.

In July 2022, Abbott's COVID-19 test kits were officially listed in the Australian Register of Therapeutic Goods (ARTG), allowing them to be legally supplied in Australia.

BD formed collaboration with CerTest Biotec with the aim of creating a molecular diagnostic test designed specifically for the detection of the monkeypox virus.



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- \*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work

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