

Molecular FISH Testing Market to Grow at a CAGR of 7.2% from 2022 to 2027 – Astute Analytica

CHICAGO, UNITED STATES, November 14, 2022

/EINPresswire.com/ -- The [global molecular FISH testing market](#) size was US\$ 645.2 million in 2021. The global molecular FISH testing market is expected to grow to US\$ 978.6 million by 2027 by registering a compound annual growth rate (CAGR) of 7.2% during the forecast period, i.e., 2022-2027.

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Fluorescence in situ hybridization or FISH is a molecular cytogenetic technique performed via molecular probes to analyze chromosomal abnormalities by hybridization.



Factors Influencing the Market

Drivers

Rising cases of genomic abnormalities and cancers will spark unprecedented growth in the global molecular FISH testing market. Additionally, FISH probes find applications in cancer cytogenetics, which will present attractive prospects because governments are pouring high funds into the pharma and biotechnology sectors. Cytogenetic abnormalities impact nearly 2% of pregnancies in women, along with 1% of live births and 6% of stillbirths.

Apart from that, molecular FISH testing offers various benefits, such as high sensitivity and high speed of the FISH technique, which will contribute to market growth.

Restraints

The high cost associated with FISH techniques is expected to complicate the market growth. The process costs around \$200,000, which is significantly high for the research labs.

Opportunities

High investments in the pharmacogenomics and pharmaceutical research sector will be opportunistic for the global molecular FISH testing market. For instance, Wellcome Trust and DBT funded the US\$ 190 million venture equally with the aim to encourage biomedical research via funding and engagement, thereby driving the growth of the market.

Segmentation Analysis

By Technology, the Cryo FISH segment leads with the highest market share

On the basis of technology, the Cryo FISH segment leads with the highest market share of 28.16% in 2021, while the Q FISH segment will exhibit the highest CAGR of 8.6%. The dominant share of the Cryo FISH segment is linked to the fact that this technique provides efficient spatial resolution, improved detection sensitivity, and enhanced probe accessibility.

By Probe type, the whole chromosome segment leads with the highest market share

On the basis of probe type, the whole chromosome segment holds the highest share of 46.1% in 2021, while the centromeric repeats segment will exhibit the highest growth rate of 7.7% over the forecast period.

The benefits of whole chromosome probes, such as efficient identification of structural chromosomal aberrations are shaping its scope in the market.

Additionally, the high prevalence of chromosome abnormality will present attractive prospects for the centromeric repeats probe because of the fact that these probes fit best for the detection of monosomy, trisomy, and other aneuploidies.

On the basis of cellular stains, the DAPI segment leads with the highest market share

In terms of cellular stains, the DAPI segment leads with the highest market share of 57.5% in 2021, while the others segment will exhibit the highest CAGR of 8.3%. The FISH method is widely used to detect genetic abnormalities, including gene fusions, aneuploidy, and chromosomal loss. The excellent share of the DAPI cellular stain is attributed to the advantages it offers as compared to other stains. For instance, cells stained with DAPI indicate zero ultrastructural alterations, and it also allows the reuse of cells.

Based on application, the cancer research segment leads

By Application, the Cancer Research segment holds the highest share 51.46%, in 2021 and will also exhibit the highest CAGR of 7.7%. FISH test is used to map the genetic material in human cells and can easily show the genetic abnormalities linked to cancer.

Based on End-User, the clinical segment leads with the highest market share

On the basis of end-user, the clinical segment leads with the highest share of 41.9% in 2021, while the companion diagnostics segment is likely to exhibit the highest growth rate of 8.3%. FISH finds a wide range of applications in the clinical research field owing to the fact that this technique is ideal for detecting chromosomal abnormalities associated with cancer.

The companion diagnostic segment will exhibit the highest growth rate because of the fact that FISH is used to analyze congenital diseases, including Down's Syndrome and Edward's Syndrome.

On the basis of region, North America held dominance in the market

Based on region, North America held the largest share of 44% in 2021, while the Asia-Pacific molecular FISH testing market will exhibit the highest growth rate of 9% over the forecast period.

The growth of the North America molecular FISH testing market is attributed to the growing demand for FISH-based diagnostic tests for early cancer diagnosis.

The Asia-Pacific molecular FISH testing market will exhibit the highest growth rate because of the growing senior population in the region, combined with the rising prevalence of infectious diseases, advanced healthcare infrastructure, and growing funding by government bodies.

Browse Detailed Summary of Research Report: <https://www.astuteanalytica.com/industry-report/molecular-fish-testing-market>

Competitors in the Market

Some of the key industry players analyzed in the global molecular FISH testing market include Thermo Fisher, Abbott Laboratories, Agilent, Oxford Gene Technology, ARUP Laboratories, and others.

Market Segmentation

By Technology:

Flow FISH

Q FISH

Immuno FISH

Cryo FISH

Other FISH

By Probe Type:

Locus specific

Centromeric repeats

Whole chromosome

By Cellular Stains:

DAPI (4,6-diamidino-2-phenylindole)

Acridine Orange

Others

By Application:

Cancer Research

- o Lung
- o Breast
- o Bladder
- o Haematological
- o Gastric
- o Prostrate
- o Cervical
- o Other

Genetic Diseases

Other

By End User:

Research

Clinical

Companion diagnostics

By Region:

North America

The U.S.

Canada

Mexico

Europe

Western Europe

The U.K.

Germany

France

Italy

Spain

Rest of Western Europe

Eastern Europe

Poland

Russia

Rest of Eastern Europe

Asia Pacific

China

India

Japan

Australia & New Zealand

ASEAN

Rest of Asia Pacific

Middle East & Africa
UAE
Saudi Arabia
South Africa
Rest of the Middle East & Africa

South America
Argentina
Brazil
Rest of South America

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