

# SERVICE Brochure



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# New strategic solution generate significant performance





#### **OBJECTIVES**

Allele Life Sciences provides a comprehensive suite of analytical, research and consulting services. These services are ideal for the testing of a full range of products and materials. Our experience in isolation of reference standards, reference material development, and analytical testing has resulted in a team of Molecular Biologist, BioChemist, Analytical Chemists and Pharmacognosists.



#### **SCIENTIFIC ADVISORY**

Allele Life Sciences believes that Human resources are the most important resources of the organisation and hence we strive hard to engage best people in the industry for serving our clients. Our experienced Scientific Advisory work as a mentor for the in-house technical staff for various activities. Our project management staff ensures that the best-qualified laboratory professional coordinates each job.

#### **MISSION**



Our Mission at Allele Life Sciences is to offer innovative and exceptional analytical process and methodologies that help industries & organisations of all sizes to achieve predictable, improved product quality level and cost associated with testing integrity requirements.



Our Management is committed to adopt good Professional Practices, maintain quality of services, achieve quality objectives, compliance of quality system requirements Ensure that all concerned personnel are aware of quality system requirements, policies and procedures. We maintain confidentiality of data at the highest priority.

#### Team

Allele Life Sciences Private Limited



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## SERVICES HIGHLIGHTS

### Molecular Biology Services



- Sequencing Services
- PCR Services
- Real Time PCR Services
- DNA Barcoding Services
- Gene Cloning Services
- DNA Methylation Services

### Protein Chemistry Services



- Protein Expression
- Protein Purification
- Protein Analysis
- Amino Acid Analysis
- Enzyme Services
- Antibody Purification Services

# In-vitro Analysis Services



- Cell Culture Assay
- In-vitro Bioassay
- Flowcytometry Assay
- Immuno Fluroscence Assay
- FISH Assay
- Cytogenetics Assay

# **Bioanalytical Services**

- Microbial Analysis
- Nanotechnology Assay
- Immunology Assay
- Chemistry Assay
- Antioxidant Analysis Services
- Oxidative Stress Assay Services
- Allergen Analysis
- GMO Analysis
- Vitamin Analysis
- Biochemical Assay
- Histopathology Services

### Analytical Services

- Analysis by HPLC
- Assay by Gas Chromatography
- Mass Spectrometry Analysis
- Fluorometric assays
- Colorimetric Services
- Toxicity Analysis

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# GENOMICS Services

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# HIGHLIGHT

- Sequencing Services
- PCR Services
- Real Time PCR Services
- DNA Barcoding Services
- Gene Cloning Services
- DNA Methylation Services





# **SEQUENCING SERVICES**

### At a glance

We provide services for Primer Sequencing, Optimized PCR amplification, purification and fragment analysis.

The value for our service is conveyed through affordable prices and fast turnaround, stringent quality control, prompt tech support and convenient primer synthesis.

We provide our best for a reliable and satisfying experience for our customers

### **Sequencing Services**

**DNA Sequencing:** 

- Whole Genome Sequencing
- Whole Exome Sequencing
- De-novo Sequencing
- Genotyping By Sequencing

#### **RNA Sequencing**:

- Whole Transcriptome Sequencing
- Small RNA Sequencing
- Long Non-coding RNA
- Isoform Sequencing

#### Microarray:

- Gene Expression
- Copy number variation
- miRNA profiling
- Custom



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# SANGER SEQUENCING

- Fragment Analysis
- Microsatellites Analysis
- SNP & Mutation Detection
- Chromosomal insertion and deletion
- 16S Microbial Identification

### **NEXT GENERATION SEQUENCING**



Next-generation sequencing (NGS) is a massively parallel sequencing technology that offers ultra-high throughput, scalability, and speed. NGS capture a broader spectrum of mutations in genome.



ADVANTAGE

#### **Cost Effective Solutions**

Our team of professionals is capable of developing innovative and **cost-effective** solutions in scientific research.

# 2

#### **Quick Turn-around**

Accelerated turn-around time guarantees that you will get your results as mentioned in contract.

# 3

#### **Technical Support**

# **PCR SERVICES**

# At a glance

PCR (Polymerase Chain Reaction) services are laboratory tests or services that evaluate genetic material using the PCR technique, usually to find out if particular bacteria, viruses, or other diseases are present. PCR is extensively utilized in research, medical diagnostics, and other fields.

#### PCR Analysis by Molecular Marker

Identification of species through COI region based molecular identity. We provide ~500 bp sequence data, Phylogenetic Tree and 10 nearest neighbour information.

- Micro-satellite Analysis -
- Copy Number Variation Analysis
- DNA sample identification

Mitochondrial DNA: The most commonly used barcode for animals is the mitochondrial cytochrome c oxidase I (COI) gene. For plants, the rbcL or matK genes are commonly used..

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# **PCR SERVICES**

- Analysis by RAPD , RFLP PCR, SSR / ISSR PCR
- G.M.O Detection
- Identification of animals by COI and 16S rRNA amplification
- Identification of invertebrates by universal primer ( LCO 1490 & HCO
  - 2198 ) amplification and Sanger Sequencing

#### Sequencing based analysis - SCAR marker Analysis



After amplification, sequencing technologies (such as Sanger sequencing or next-generation sequencing, NGS) are used to determine the exact nucleotide sequence of the barcode region.



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#### **Technical Support**

# Real time PCR Services

### At a glance

Real-time PCR (Polymerase Chain Reaction) services are laboratory services that simultaneously amplify and quantify a specific DNA or RNA molecule in real time using a molecular biology technology. Numerous applications, such as pathogen detection, genetic research, and illness diagnostics, depend on these services..

#### Gene Expression Analysis

A specific DNA segment—usually complementary DNA, or cDNA, produced from mRNA—is amplified in real-time PCR, which tracks the amplified product's buildup. Gene expression levels are inferred using the PCR product, which is proportional to the original amount of template DNA (or cDNA) in the sample.

- Reverse Transcription (RT)
- Quantification of Amplified Product
- Genetic and Developmental Studies
- Quantification of Microbial Gene Expression.
- Cancer Diagnostics
- Infectious Disease Detection
- Detection of Genetic Variants and Mutations
- Quantification of Gene Expression.

### **Real Time PCR Services**

- Pathogen Detection and Diagnosis
- Gene Expression Analysis
- Genetic Testing and Diagnostics
- Quantification of DNA and RNA
- Genotyping and SNP Analysis

#### **Technologies Available**



.Our facilities equipped with a broad selection of PCR and qPCR instruments from leading manufacturers, including fast cyclers, High Resolution Melt (HRM) cyclers, and high throughput instruments.



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#### **Technical Support**

# **Gene Cloning** SERVICES

# At a glance

Genome editing is widely used in within the biotech industry to help improve the effectiveness of engineering. We provide comprehensive tools and services including ready-to-use sgRNA synthesis, sgRNA vector construction, CRISPR sgRNA library synthesis and genome editing services

# **CLONING SERVICES**

Our molecular biology experts can bundle gene synthesis with cloning into your choice of vector. Our cloning services includes TA cloning, cloning of full length cDNA or PCR products, synthetic genes or subcloning of vector inserts.

# **CRISPR/CAS9 GENE EDITING**



CRISPR/Cas9, is an RNA-guided genome editing tool which allows researchers to do gene knockout, knock-in SNPs, insertions and deletions in cell lines and animals.



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#### **Technical Support**

We offer custom design for your targeted sequencing projects, data analysis and consulting.

# Other Services

- Knock-out of single or multiple target sequences
- Site-mutation knock-in and gene tag knock-in
- Screening for single positive clones
- Cell expansion and validation
- **Custom gRNA cloning service**
- **Custom Donor Vector**
- Construction

# GENE EXPRESSION SERVICES

# At a glance

The genotypic information is used for plants ,Microbial,insects, animal identification and forensic analysis. Gene expression services like NGS sequencing, DNOur services include SSR , RAPD, SNP, and RFLP , Barcoding based methods to fingerprint (genotype) individuals. The genotypic information is used for plants Microbial, insects, animal identification and forensic analysis.

# **DNA Barcoding**

Identification of species through COI region based molecular identity . We provide ~500 bp sequence data, Phylogenetic Tree and 10 nearest neighbour information . Species Identification | | Molecular Identification Sea Food

**OUR SOLUTIONS :** We undertake the whole project for genotyping services

- Microsatellite Analysis DNA Barcoding
- Copy Number Variation Analysis
- DNA sample identification

# **GENOTYPING SERVICES**

- PCR based Analysis RAPD, SSR, ISSR
- Sequencing based analysis SCAR marker Analysis
- Non PCR based Analysis RFLP
- QTL Analysis
- DNA Barcoding

### **GENE EXPRESSION**



Gene expression services like NGS sequencing, DNA microarrays, PCR and RT-PCR or multiplex technologies, as well as highly complex data analysisA microarrays, PCR and RT-PCR or multiplex technologies, as well as highly complex data analysis



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#### **Technical Support**

# EPIGENETIC ANALYSIS SERVICES

# At a glance

Methylation analysis is the study of chromosomal patterns of DNA or histone modification by methyl groups, which is a chemical post-replicative modification affecting CG dinucleotides, in which a methyl group (CH3) is added to these dinucleotides in a covalent manner. The cytosine (C) base in DNA and lysine residue in histone tails can be methylated.

### Analysis By HPLC

Bisulfide Modification and Methylation HPLC Analysis :

We provides efficient and accurate methylation analysis services through HPLC analysis. Bi-sulfite treatment allows to explore methylation levels of genomic DNA. Non-methylated cytosine are converted to uracil and then to thymine. Sequencing and mapping to adequate read depth allows to detect the level of (5-methylcytosine) on DNA 5mC molecules / PCR Products

#### Methylation Analysis by ELISA by

using highly specific antibodies to target epigenetic markers



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# **EPIGENETIC SERVICES**

- COMET Assay
- Methylation Analysis by PCR
- Methylation Analysis by Sequencing
- Analysis by HPLC by estimation of 5-mC or 5-hmC
- Methylation Analysis by ELISA (measurement of 5-mC or 5-hmC)

#### DNA METHYLATION ANALYSIS BY SEQUENCING

**Methylation Specific PCR:** Methylation-specific PCR is one of the most commonly used methods for gene/sequence-specific detection of DNA methylation. The DNA undergoes bi-sulfite conversion of cytosine to uracil and then the methylated sequences are selectively amplified with primers specific for methylation and sequencing.

**In Whole Genome Bisulfide Sequencing** - Bi-sulfite conversion PCR primer design PCR amplification optimization Library preparation QC of final libraries (DNA concentration, analysis of the profile) Sequencing on Illumina platform

#### ADVANTAGE

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#### **Technical Support**

We offer custom design for your targeted sequencing projects, data analysis and consulting.



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# MICROBIOME ANALYSIS SERVICES

### At a glance

We provide metagenomics services for Biotech , Environmental , Medicine , Agriculture , Bio-Energy Microbial Forensic Research. Metagenomics is the study of genomic content in a complex mixture of microorganisms. The primary goals of Metagenomics are to characterize the organisms present in a sample and to identify what roles these organism may have within a specific environment

# **Microbial Analysis**

- Metagenomic Analysis: We provide microbial identification services for research projects. We analyse a and diverse of samples
- variety sample matrices. 16S rDNA
  based molecular identity || RFLP based molecular protocol || a Identification of bacteria in consortium || Phylogenetic Tree

# **MICROBIOME ANALYSIS**

- 16S/18SrRNA Sequencing
- ITS Sequencing
- Shotgun Metagenomic Sequencing
- Meta Transcriptome Sequencing
- WGS- Metagenome Sequencing
- Difficult DNA Templates Sequencing
- Primer Walking Service
- Target Region Sequencing
- Nextgen Sequencing



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# PROTEIN CHEMISTRY SERVICES

# HIGHLIGHT

- Protein Expression
- Protein Purification
- Protein Analysis
- Amino Acid Analysis
- Enzyme Production
- Antibody Purification



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# Protein Expression vices

### At a glance

Mammalian expression systems are widely used for producing recombinant proteins, particularly when complex post-translational modifications (PTMs) or proper protein folding are required.

These systems utilize mammalian cells to express proteins in a manner that closely resembles native protein production in human cells..

# **Purification Services**

- Protein expression in Cell
- Bacterial expression
- Mammalian Cell expression
- Free Codon Optimization
- ≥98% Purity
- <0.001 EU/µg Endotoxin
- High Yield Ranging from µg-g
- Fast Delivery in 4-6 Weeks

# **PROTEIN EXTRACTION SERVICES**

Protein extraction is a crucial for various protein assays. Below, Our scientists have optimised protocol for a wide range of tissues, including tips to preserve the integrity of the proteins in your samples and achieve optimal yield. We provide high-quality protein isolation and extraction services for research applications.

### **PROTEIN EXPRESSION SERVICES**



We have four major protein expression platforms: bacterial, yeast, insect, and mammalian cells. Our customization services include the systematic selection of expression vectors, hosts, and fusion tags based on protein characteristics and client requirements.



#### **Cost Effective Solutions**

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#### **Quick Turn-around**

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#### **Technical Support**

# PROTEIN PURIFICATION SERVICES

## At a glance

Protein purification is a crucial step for projects involving research on structural and functional properties. The quality of the protein cannot be compromised. A successful protein purification relies on optimised purification protocols. Depending on the requirements and nature of the protein, targeted purification protocols can be developed at in house lab facility.

# **Purification Services**

- Protein expression in Cell
- Bacterial expression
- Mammalian Cell expression
- Protein purification to near homogeneity (purity >90%)
- Poly His Tag protein purification
- GST protein purification
- HPLC purification
- HPLC Analysis
- Expression systems with tag
- Purified proteins with Endotoxin level < 0.01EU/µg</li>

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# **Protein Purification Services**

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Protein purification is a crucial procedure used to separate a particular protein from a complicated mixture.

- Affinity Chromatography
- Ion Exchange Purification
- Hydrophobic Interaction Purification
- Size Exclusion Chromatography (SEC)

#### **Purification Technologies**



Our facilities equipped with a broad selection of protein purification Chromatography instruments from leading manufacturers - GE Akta & Biorad, including different size or volume of protein purification columns and media for purification.



#### **Cost Effective Solutions**

Our team of professionals is capable of developing innovative and **cost-effective** solutions in scientific research.

#### **Quick Turn-around**

Accelerated turn-around time guarantees that you will get your results as mentioned in contract.

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#### **Technical Support**

# PROTEIN ANALYSIS SERVICES

# At a glance

We offer a range of protein analysis and characterisation services to characterize the identity, purity, quantity and quality of your protein.

Our tools include gel electrophoresis, ELISA, Iso Electric Focusing, Low Pressure Liquid Chromatography, HPLC (reverse phase, ion exchange and size exclusion), and bacterial endotoxin testing.

# **Purification Services**

- Amino Acid Analysis
- Molecular Weight Determination
- Extinction Coefficient (A280)
- Protein Analysis (HPLC)
- Analysis By ELISA
- Spectrofluorometric characterization
- Protein Electrophoresis
- Western Blot Analysis

# **PROTEIN SERVICES**

- Protease Activity Assay (FRET Assay)
- HCP Analysis by ELISA
- Residual Host Cell Assay (qPCR)
- Protein Potency Assay by ELISA
- Cell Based Assay
- Protein Stability Assay

### **PROTEIN ANALYSIS SERVICES**

selection of HPLC, .Our facilities broad equipped with а Spectrophotometer, Micro Plate Reader, Western Blot, Vertical Electrophoresis, PCR and qPCR instruments leading from manufacturers.



**ADVANTAGE** 

#### **Cost Effective Solutions**

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#### **Technical Support**



### At a glance

Amino acids are found either in the free state or as linear chains in peptides and proteins. There are 20 commonly occurring amino acids in proteins amino acids analysis is required in several areas of research. It is an important tool for many scientific areas ranging from the characterisation of recombinant proteins to the nutritional assessment of food proteins and animal feed.

Amino Acid Analysis Assay

Analysis of common natural amino acids : Aspartic acid , Threonine, Asparagine, Glutamine, Sevine, Protime, Glycfhe, Alanine, Valine, Cystine, Methionine, Isoleucine, Leucine, Phenylalanine, Tyrosine, Phenylalanine,

Lysine, Histidine, Tryptophan, Arginine

We provide detailed information regarding the relative amino acid composition and free amino acids. The Amino Acid Analysis procedure includes hydrolysis, separation, detection and quantification

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### **ANALYSIS OF AMINO ACID**

- Complete amino acid profile
- Amino Acid profile ( liquid hydrolysis)
- Amino acid profile without tryptophan
- Amino Acid profile with Hydroxyproline, Taurine methionine and lysine +9
- Standard protein hydrolysate
- Free supplemental amino acids
- Complete supplemental amino acid profile
- Available lysine and complete amino acid profile
- Glutamine (peptides and protein)
- Physiological Analysis of Biological Fluids



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#### **Quick Turn-around**

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#### **Technical Support**

We offer custom design for your targeted sequencing projects, data analysis and consulting.

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# An<mark>t</mark>ibody Puri<mark>ficatio</mark>n Se**r**vices

## At a glance

We offer a variety of methods for antibody purification from serum, ascites, and culture supernatants. We use a variety of methods for purification of antibody from serum, ascites, and culture supernatants including ammonium salt precipitation, ion exchange and size exclusion chromatography, IMAC, GST, Protein A, and Protein G affinity chromatography, and custom affinity chromatography.

# Antibody Labelling

Any antibody / Fab / F(ab')2 conjugation / labeling with :

- Fluorochromes-FITC, AMCA, Alexa Fluor, pNA), Lissamine Rhodamine B (LRB), Cyanine (Cy2), Indocarbocyanine (Cy3), Indodicarbocyanine (Cy5), Texas Red (TR), etc.
- Dabcyl, Dansyl, etc.
- Multiple labeling for FRET
- Enzymes HRP, ß-galactosidase,
- Alkaline Phosphatase etc. Biotin\_\_\_\_\_
- Avidin / Streptavidin
- Keyhole Limpet Haemocyanin (KLH)
- Bovine Serum Albumin (BSA)
- Ovalbumin (OVA)
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# ANTIBODY PURIFICATION

- Affinity purification permits isolation of antibodies against the immunizing antigen, thereby eliminating cross-reactivity that would be present in unpurified serum. Antibodies of extremely high purity and specificity can be obtained by using custom affinity chromatography. Protein A, G, and A/G Purification High yields of
- pure IgG can be obtained in a single-step purification using Protein A
- affinity chromatography, which differ in their ability to bind antibodies



Purification by Ion-Exchange Chromatography



Purification by Size Exclusion Chromatography

### ADVANTAGE

**Purification by** 

Affinity

Chromatography

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#### **Quick Turn-around**

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#### **Technical Support**

# ENZYME PRODUCTION SERVICES

# At a glance

Enzyme production has gained popularity due to its extensive applications in traditional and modern industrial sectors. Our experienced scientific experts provide enzyme production & Optimization, customized recombinant enzyme expression and purification services according to your specific project requirements.

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# **Enzyme Services**

- Submerged Fermentation
- Solid State Fermentation
- Purification by Affinity Chromatography
- Purification by HPLC
- Purification by Ion Exchange Chromatography
- Purification by Size Exclusion Chromatography

# **ENZYME PRODUCTION**

Enzymes are proteins that act as catalysts in living cells, thus they speed up the rate of a specific chemical reaction in the cell. Enzyme catalysis is a reaction that happens in almost all the metabolic processes in the cell. Most enzymes are proteins but some of them are catalytic RNA molecules called ribozymes. Enzymes increase the rate of a reaction by decreasing its activation energy.

- Microbial Analysis Total Plate Counts, Yeast & Molds, Coliforms, Antibiotic Activity
- Identification of microbial strain with 16s, 18s or 23s rDNA Analysi
- In-silico Enzyme kinetics Vmax, Kd, KM, kcat, k1, and k-1
- Screening of Substrates, Inhibitors, and Other Ligands
- Enzyme Production and Optimisation
  - Enzyme Expression :Gene identification, synthesis and cloning
- Identification and optimization of enzyme expression conditions
- Enzyme Purification
- Endotoxin removal

### **ADVANTAGE**



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#### **Technical Support**

# ENZYME ANALYSIS SERVICES

# At a glance

Our laboratory conducts routine enzyme analysis for a variety of enzymes. Enzymes can be a beneficial additive to animal feeds and in human dietary supplements. Their use as digestive aids and metabolic catalysts is becoming increasingly more common in a variety of applications.

# **ENZYME ANALYSIS**

- Enzyme Activity Assay Measurement of enzyme concentrations by
- ELISA & BCA Assay Assessment of enzyme purity by SDS-PAGE &
- HPLC Molecular weight determination by SDS-PAGE & Western Blot
- Kinetics study of enzyme Amino-terminal sequence analysis
- Activity Measurement General Enzyme assays (Amylase, Protease,
- Pectinase, Cellulase, Chitinase etc) Enzyme kinetics Enzyme
   immobilisation Impurity Analysis- Endotoxin & Mycotoxin level
- Inhibitors and activators characterisation

# Services

- Textile Enzymes
- Industrial Enzyme
- Pharmaceutical Enzyme
- Food Enzyme
- Cosmetics
- Bio Agriculture



Purification by Affinity Chromatography



### ADVANTAGE



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#### **Technical Support**



# HIGHLIGHT

- Cell Culture Assay
- In-vitro Cell Analysis
- Flow Cytometry Analysis
- Immuno Fluorescence Assay
- Fluorescence Microscopy Assay
- Cytogenetics Assay

# IN-VITRO ANALYSIS

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# **Cell Culture Assay**

### At a glance

We can grow adherent or suspension cells, depending on the client's preferences. The lab is equipped with the latest tools and supplies required to maintain and grow a range of cells and tissues.

Basic cell counters, autoclaves, water baths, programmable freezers, CO2 incubators, inverted phase contrast microscopes, and laminar flow hoods are among the equipment at the facility. At our facilities, we presently maintain a range of cell lines.

# Cell Based Assay

Cell proliferation assays:

Cell scrapers should be used in these circumstances to manually suspend the cells in a small volume of fluid.

- Cell Morphology Study
- Cell Proliferation Assays
- Primary cell line derivation service

# **Cell Culture Assay**

- Adherent cell culture service
- Suspension cell culture service
- Primary cell line derivation service

#### Sub Culture of Cells:

It takes a lot of effort and time to prepare cells from a culture that is constantly developing for use in an experiment. Making ensuring the cells are prepared on schedule, in the right amounts, and with a constant quality is crucial.

Even though different cell types adhere to surfaces to differing degrees, proteases are frequently used to extract the cells from the flask. However, if significant receptors or membrane markers are removed by the enzymes used, or if there is a risk of protease exposure, this may not be appropriate for some lines.

Cell scrapers should be used in these circumstances to manually suspend the cells in a small volume of fluid.

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#### **Technical Support**



## At a glance

Tests under in vitro conditions are carried out in cell culture. These tests allow the study of biological functions and phenomena: each type of test corresponds to a function or mechanism.

This applies in particular to cell migration, viability or immune response. Existing tests are adapted according to projects. Outsourcing cell assays is an affordable and proven method for life science and pharmaceutical research.

# Cell Based Assay **Apoptosis Assay:**

Apoptosis plays a crucial role physiological processes, and

Migration and Invasion Assays:

Techniques like the scratch assay (also known as the wound healing assay) are used to study cell migration. This method is simple, cost-effective, and involves creating a "scratch" in a cell monolayer to observe the movement of cells into the gap.



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# **IN-VITRO CELL ANALYSIS**

Cell-based assays are a vital early step in the testing of your compounds and drug candidates for activity.

- Cell Culture Revival of cells, Sub-culturing of cells, Cell counting, Cell seeding
- Cell Viability and Cell Morphology Cell
- Proliferation Assays Cytotoxicity Assay Cell
- Death Assays- Apoptosis Quantification .
- **RT-PCR Analysis Gene Expression Studies**

Cell Viability Assay : Cell-based assays and analysis are vital experimental tools in life science research and biomanufacturing. Cell viability assays can be multiplexed with other assays including cytotoxicity and apoptosis measurements.

Cytotoxicity & Proliferation Assay: Cytotoxicity and cell proliferation assays are commonly used in the drug discovery process to assess a compound's ability to cause or block a biologic activity without having toxic effects on cells.

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# Flow Cytometry Analysis

# At a glance

Flow cytometry is a powerful laboratory technique used to analyze the physical and chemical characteristics of cells or particles suspended in a fluid stream.

By passing these cells through a laser beam, the instrument measures light scattering and fluorescence emission, providing detailed information about each cell's properties

### Applications of Flow Cytometry:

Immunophenotyping:

Identifying and quantifying specific cell populations based on surface or intracellular markers.

#### Cell Viability Assessment:

Distinguishing live from dead cells using viability dyes, important in evaluating cell health in various treatments.

**Apoptosis Detection:** 

Measuring markers of programmed cell death to study disease mechanisms and treatment efficacy.



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# **Flow Cytometry Analysis**

We offer end-to-end solutions for immunophenotyping by flow cytometry. Flow cytometry can be customized to meet your unique research requirements, regardless of whether you are researching immune response, cell signaling, or cell cycle dynamics. Numerous scientific fields, including as immunology, cancer, stem cell research, microbiology, and drug discovery, can benefit from the use of flow cytometry..

- Cell Counting
- Immunophenotyping Analysis
- Cell Sorting & Proliferation Assay
- Measurement of Cell Characteristics
- Apoptosis Detection Services
- DNA content for cell cycle distribution
- Analysis of fluorescent in situ hybridization (FISH)
- Intracellular Cytokine Detection

### **ADVANTAGE**



#### **Cost Effective Solutions**

Our team of professionals is capable of developing innovative and **cost-effective** solutions in scientific research.

#### **Quick Turn-around**

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#### **Technical Support**

We offer custom design for your targeted sequencing projects, data analysis and consulting.



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# Fluorescence In-Situ Hybridization (FISH) Assay

# At a glance

A molecular cytogenetic approach called Fluorescence In Situ Hybridization (FISH) locates and identifies particular DNA sequences on chromosomes or inside cells using fluorescent probes.

Because of its accuracy and capacity to identify particular genetic disorders, this method is frequently used in clinical diagnostics, genetic research, and oncology.

#### Fluorescence In-Situ Hybridization

- Culture of cells
- Treatment and transfection of cells
- Immunostaining
- Imaging of the cells

#### Genetic Diagnostics:

FISH is widely used to detect chromosomal abnormalities, such as deletions, duplications, translocations, and aneuploidies, which are associated with various genetic disorders and cancers



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# Fluorescence In-Situ Hybridization 🗸

#### Fluorescence In-Situ Hybridization (FISH)

A molecular cytogenetic approach called Fluorescence In Situ Hybridization (FISH) locates and identifies particular DNA sequences on chromosomes or inside cells using fluorescent probes. Because of its accuracy and capacity to identify particular genetic disorders, this method is frequently used in clinical diagnostics, genetic research, and oncology.

#### **Cell Imaging**

Modern biology relies heavily on cell imaging, which enables scientists to see and examine the dynamics, structure, and function of cells in great detail. To investigate cellular processes in fixed or live samples, it includes a number of methods such as fluorescence microscopy, live-cell imaging, and high-content screening.

- Brightfield Microscopy
- Phase-Contrast Microscopy
- Fluorescence Microscopy
- Live-Cell Imaging.

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# Immunofluorescence Assay (IFA)

# At a glance

An Immunofluorescence Assay (IFA) is a laboratory technique that utilizes antibodies conjugated to fluorescent dyes to detect specific antigens in biological samples.

This method allows for the visualization of the distribution and localization of target molecules within cells or tissues using fluorescence microscopy.

# Immunofluorescence Assay (IFA)

Principle of Immunofluorescence:

- Cells or tissue sections are fixed to preserve morphology and antigenicity.
- Blocking of non specific binding sites
- Antibody is incubated with primary antibody (Secondary in indirect IFA)
- Antibodies are washed away to reduce non-specific staining
- The sample is mounted with a medium that preserves fluorescence and is examined under a fluorescence microscope.



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# Immunofluorescence Assay (IFA) 🗸 🗸

**Direct Immunofluorescence :** 

- Use of a single antibody that is directly conjugated to a fluorescent dye.
- This labeled antibody binds specifically to the target antigen in the sample.
- Direct immunofluorescence is commonly used in clinical diagnostics to detect the presence of specific antigens in tissue sections or cell smears.

Indirect Immunofluorescence:

- Utilizes an unlabeled primary antibody that binds to the target antigen, followed by a fluorescently labeled secondary antibody that recognizes the primary antibody.
- This method can amplify the signal, making it more sensitive than direct immunofluorescence.
- Indirect immunofluorescence is widely used in research and diagnostic laboratories to detect autoantibodies or to study protein localization within cells

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#### **Technical Support**

# Cytogenetics Assay

# At a glance

These services are crucial for understanding genetic abnormalities, cancer, and prenatal problems, as well as for clinical diagnostics, research, and drug development.

We offer cytogenetic services that identify structural and numerical chromosomal abnormalities, such as translocations, amplifications, and micro-deletions, employing assays based on Fluorescence In-Situ Hybridization (FISH) and modified Karyotyping..

#### Chromosomal Microarray Analysis:

high-resolution method for identifying chromosomal abnormalities including copy number variations and homozygosity regions throughout the genome is called chromosomal microarray analysis. In clinical diagnostics for genetic abnormalities, it is a commonly utilized tool, especially in cancer, pediatric, and prenatal diagnoses..

# **Cytogenetics Assay**

Chromosome analysis is part of cytogenetics test services, which look for structural or numerical anomalies.

- Karyotyping Analysis
- Fluorescence In-Situ Hybridization (FISH)
- Molecular Genetics Services
- Chromosomal Microarray Analysis (CMA)

#### **Karyotyping Analysis**

Karyotyping is the process of viewing chromosomes under a microscope during the metaphase phase of cell division and organizing them into a karyogram using a standard format that includes banding patterns, size, and shape.

- Chromosomal Abnormalities
- Prenatal Testing
- Infertility and Miscarriage Analysis
- Cancer Diagnosis
- Reproductive Medicine.

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#### **Technical Support**



# **BIO-ANALYTICAL ASSAY SERVICES**

# HIGHLIGHT

- Microbial Analysis
- Nanotechnology Assay
- Immunology Assay
- Chemistry Assay
- Antioxidant Analysis Services
- Oxidative Stress Assay Services
- Allergen Analysis
- GMO Analysis
- Vitamin Analysis
- Biochemical Assay
- Histopathology Services



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# Microbial Analysis Services

# At a glance

We provide microbiological analysis in India. Our microbial services include the analysis of bacteria, fungi (mold), Yeast, mycotoxins, endotoxins, allergens, anti microbial efficacy and biofilm testing. Our lab is well equipped for microbiology as well as excels in molecular identification of microorganism.

# Services For

- Microbiology Research
- Analysis of Environmental Samples
- Dentistry Sample Analysis
- Food Analysis
- Herbal Analysis
- Water Sample Analysis
- Beverages Analysis

# **MICROBIAL ANALYSIS**

- Microbial Analysis
- Invitro Microbial Analysis
- Minimum Inhibitory Concentration
- Minimum Bactericidal Concentration
- Antimicrobial Susceptibility Testing
- Minimum Doubling Growth Curve
- Antimicrobial Synergy Testing
- Biofilm Analysis

# MICROBIAL GENETICS

- Bacterial identification using 16S rRNA gene
- Fungal identification using ITS1- ITS2/28S rRNA region
- Algal identification using 23S rRNA
- Difficult DNA Templates Sequencing
- Primer Walking Service
- Target Region Sequencing
- Nextgen Sequencing

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#### **Technical Support**

# Nanotechnology Assay Services

### At a glance

Nanotechnology offers multiple benefits in treating chronic human diseases by site-specific, and target-oriented delivery of precise medicines.

Nanoparticles are synthesized using chemistry methods, which involve first generating the particles in a solution, drop casting the wet particles onto a substrate, and removing the solvent, surfactants, and other materials from the particles.

# Characterization of Nano Particles

- Analyze structure physical characteristics and particle size by SEM
- Internal structure, physical characteristics, particle size and elemental composition by EDX technique.
- Fluorescence Stereomicroscope
- Fluorescence Spectrometer
- Analysis by UV-Vis-Spectrophotometer
- Analysis by HPLC/ Gas
   Chromatography
- Analyze the functional group by FT-IR
- Zeta Potential Analysis

# NANOTECHNOLOGY ASSAY

- Synthesis Using Microorganisms / Plant Extracts / Algae
- Sol-gel method
- Sonochemical synthesis
- Co-precipitation method
- Inert gas condensation method
- In-vitro Cytotoxicity Assay
- Gene Expression Assay by RT-PCR
- ROS Assay
- Oxygen Radical Capacity Antioxidant (ORAC) Assay
- Total Antioxidant Capacity (TAC ) Assay
- Ferric Reducing Antioxidant Power (FRAP) Assay



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#### **Technical Support**

# Immunology Assay Services

# At a glance

immunological assay are the biochemical test commonly used to measure concentrations of macro/micro molecules like; antibodies, antigens, proteins and glycoproteins in biological samples ..

### Flow Cytometry Analysis

Flow cytometry include phenotyping of immune cells, intracellular cytokine (ICS), tentramer staining and pentamer peptide-binding evaluations.

- Cytokine expression
- Intracellular staining
- Phospho-flow assays

#### Analysis by Western Blotting

Western blotting (also called immunoblotting) is used to detect specific proteins in a sample based on their size and ability to bind to an antibody.

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# IMMUNOLOGY ASSAY

- Enzyme-Linked Immunosorbent Assay (ELISA)
- Analysis by Western Blotting
- **Flow Cytometry Analysis**
- Analysis by Immunohistochemistry (IHC)
- **Cytokine Assays**
- **Complement Assays**

#### Analysis by Immunohistochemistry (IHC)

Immunofluorescence Assay (IFA) is a powerful technique used to detect specific proteins or antigens within cells or tissues using antibodies conjugated to fluorescent dyes. This method is widely used in cell biology, pathology, and diagnostics for studying cellular structures, protein localization, and disease markers.

- Genetic Testing
- Fluorescence In Situ Hybridization (FISH)
- Analysis by Immunohistochemistry (IHC).



### **ADVANTAGE**

#### **Cost Effective Solutions**

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### **Quick Turn-around**

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#### **Technical Support**

# Chemical Assay Services

# At a glance

Chemistry assay services involve the analysis, quantification, and characterization of chemical compounds, nanomaterials, and biomolecules. These services are critical in pharmaceuticals, nanotechnology, environmental science, and material research.

### Chemical Composition & Purity Analysis

Chemical composition and purity analysis services focus on identifying, quantifying, and ensuring the purity of chemical substances.

- Analysis by HPLC
- Gas Chromatography Analysis
- Mass Spectrometry Analysis
- Spectroscopic Analysis

Elemental & Trace Metal Analysis

Elemental and trace metal analysis is essential for detecting and quantifying metal and non-metal elements in various samples, including pharmaceuticals, environmental materials, nanomaterials, food, and industrial products.



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# **Chemical Assay Services**

- Chemical Composition & Purity Analysis
- Elemental & Trace Metal Analysis
- Nanomaterial Characterization
- Stability & Degradation Studies
- Drug Assays & Bioanalytical Testing

#### Stability & Degradation Studies

Stability and degradation studies are essential for assessing the durability, shelf life, and safety of nanomaterials, pharmaceuticals, and chemical formulations.

#### Drug Assays & Bioanalytical Testing

Drug assays and bioanalytical testing are essential for evaluating drug potency, pharmacokinetics, metabolism, and safety..



### **ADVANTAGE**



#### **Cost Effective Solutions**

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#### **Quick Turn-around**

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#### **Technical Support**

# Antioxidant Analysis Services

### At a glance

Free radicals and reactive oxygen species (ROS) are highly reactive molecules, excess production of reactive oxygen species can also lead to severe damage in the biological system. We offer various screening methods for evaluating the total antioxidant activity of compounds or extracts; DPPH, FRAP ABTS, and ORAC antioxidant assays.

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# Total Groups Antioxidant Activity Assay

- Assay for total flavonoids
- Assay for polyphenols
- Carotenoids
- Anthocyanin

Individual Compound Activity Assay : We offer anti oxidant activity of the compounds like; Resveratrol, Ascorbic Acid, Catechin, Carotenoids, isoquercitrin, aspalathin, Vitamin E etc.

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# **ANTIOXIDANT ANALYSIS**

- DPPH Antioxidant Assay
- Oxygen Radical Capacity Antioxidant (ORAC) Assay
- Total Antioxidant Capacity (TAC) Assay
- Ferric Reducing Antioxidant Power (FRAP) Assay
- ABTS Assay
- Superoxide dismutase (SOD)
- Catalase
- Glutathione reductase (GR)
- Glutathione peroxidase (GPx)
- GSH / GSSG ratio



### **ADVANTAGE**



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#### **Quick Turn-around**

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#### **Technical Support**



### At a glance

Reactive oxygen species (ROS) are chemically reactive molecules containing oxygen that play several beneficial roles for the organism.An imbalance between the production of ROS and the ability of the antioxidant systems to readily detoxify these reactive intermediates results in oxidative stress

# Total Groups Antioxidant Activity Assay

- Assay for total flavonoids
- Assay for polyphenols
- Carotenoids
- Anthocyanin

Individual Compound Activity Assay : We offer anti oxidant activity of the compounds like; Resveratrol, Ascorbic Acid, Catechin, Carotenoids, isoquercitrin, aspalathin, Vitamin E etc.

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# **OXIDADTIVE STRESS ASSAY**

- Direct Measurement of Reactive Oxygen
- Protein Damage Assay
- DNA Damage Assay
- Lipid Damage Assay

Reactive oxygen species (ROS) are chemically reactive molecules containing oxygen that play several beneficial roles for the organism.An imbalance between the production of ROS and the ability of the antioxidant systems to readily detoxify these reactive intermediates results in oxidative stress



#### **Cost Effective Solutions**

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#### **Quick Turn-around**

Accelerated turn-around time guarantees that you will get your results as mentioned in contract.

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#### **Technical Support**

# Biochemical Assay Services

# At a glance

Biochemical assays are analytical procedures which allow the detection and quantification of cellular processes.They are a type of common procedures that help in the characterization of the target while understanding its function.

### **Bio Chemical Assay**

METABOLISM ASSAY: It enables a wide range of experimental observations including Enzymes, Oxidative stress, Liver biomarkers, Kidney biomarkers, Amino acids & proteins, Glycolysis & Carbohydrates, Inorganic ions, Lipids metabolism, Plant stress resistance, Tricarboxylic Acid (TCA) Cycle, etc

**COMET ASSAY:** DNA damage in individual eukaryote cells. It can score many different types of cell; regardless of species, cell size and level of DNA damage.

MICRONUCLEUS ASSAY: Micronucleus assays is one of the preferred methods for assessing chromosome damage and toxicological screening for potential genotoxic compounds



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# **BIOCHEMICAL ASSAY**

- Cell based Assay
- PCR based Assay
- Assay by Chromatography
- Colorimetric assay
- Fluorometric assays
- Gel-based assays
- Assay with ELISA

**CELL BASED ASSAY:** Cell based assays can be grouped into categories such as cell proliferation assays, cell death assays, reporter gene assays, and cell signaling assays





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#### **Technical Support**

# G.M.O Analysis Services

### At a glance

A Genetically Modified Organism (GMO) is an organism whose genetic material has been altered using genetic engineering techniques.Many countries around the world have enacted laws to restrict the levels of GMOs in food product. GMOs are detectable with different methods. Yet only the detection of DNA with polymerase chain reaction (PCR) and extensive portfolio of immunoassays for sensitive, easy and quick GMO detection.

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## GMO Analysis Assay

The commonly used technologies for gmo analysis in foods / agriculture crop are qualitative, quantitative PCR analysis and immunoassay methods.

- Qualitative GMO Analysis
- Semi-Qualitative Analysis
- Single-Threshold GMO Analysis
- Real Time PCR Analysis
- Immunoassay
- Sequencing Method

### **ANALYSIS OF G.M.O**

- GMO protein in leaf tissue, single seed, or bulk grain samples
- Research Sample
- Agriculture Crop
- Cotton
- Soya
- Animal Feed

GMO screening by PCR method is a fast and cost effective method for the detection of various GMOs to achieve this objective we will use the 35S (promoter) and NOS (Terminators) primers and qualitative and semiquantitative determination is possible. Analysis by Immunoassay is also used in GMO detection.



#### **Cost Effective Solutions**

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#### **Technical Support**



## At a glance

Allergens are mainly proteins that the immune system of allergic individuals. Food allergies are typically IgE-mediated, which means that of

the body produces large amounts antibodies that specifically target the proteins of certain food products.

There is no specific trouble induced by food allergens. These items have different reactions to different bodies. Allergic reactions could cause immediate wheezing, vomiting, and hives, stomach upset etc.

### Allergen Assay

Analysis of Allergens by HPLC : Analysis of Allergens by Affinity Purification and HPLC -FLD Detector.( Fluorescence detectors are highly sensitive detectors best suited for cases where the compounds either are inherently fluorescent)

Allergen detection using PCR & real-time PCR: The PCR reaction allows obtaining qualitative results.. Fluorescence detectors are highly sensitive detectors best suited for cases where the compounds either are inherently fluorescent, or have been modified to be so.We may analyse food allergens by Multiplex-PCR (Several Genes in single reactions), Duplex PCR and HPLC-PNA-PCR



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### **ALLERGEN ANALYSIS**

- Agriculture Food Crops, Cereals containing gluten, Oat, Barley, Rye, Spelt, Kamut, Wheat
- Dry Fruits
- Eggs
- **Fish**
- Soybeans
- Milk , Casein and/or Beta-lactoglobulin
- Peanuts and other nuts including almonds, hazelnuts and walnuts
- Sulphur dioxide and sulphites which are used as preservatives in
- food products like sausages and dried fruits.

**Immunological allergen detection by means of ELISA :** ELISA methods detect the allergen protein molecule by binding antibodies to the allergen. The samples are processed and change color to confirm the presence of the allergen protein.

**PCR-ELISA :** In the PCR-ELISA method the detection of an allergen does not require gel electrophoresis. The amplified DNA fragment is labeled with biotin or digoxygenin.

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Vitamins are essential micronutrients that humans and animals need in small amounts for various roles throughout the human body. There are thirteen vitamins all together, some water soluble and some lipid soluble.

## Vitamin Analysis Assay

ANALYSIS OF WATER SOLUBLE VITAMIN : We have validated a robust analytical method to detect and quantify 10 watersoluble vitamins; thiamin (B1), riboflavin (B2), nicotinic acid (B3-OH), nicolinamide (B3-NH2), pantothenic acid (B5), Vitamin B6, biotin (B7), folic acid (B9), Vitamin B12 and Vitamin C.

ANALYSIS OF FAT SOLUBLE VITAMIN : We have developed fat-soluble vitamins (vitamin A, vitamin D, vitamin E, vitamin K) a reverse phase column and diode array detection (DAD).

### **ANALYSIS OF VITAMINS**

- Biological Sample
- Research Sample
- Food / Pet Food Sample
- Nutraceutical Product
- Herbal Product
- Pharmaceutical Product

The commonly used technologies for vitamin analysis in foods are chromatographic, electrophoretic, immunological, spectrophotometric, fluorometric, and microbiological methods.



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#### **Technical Support**

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## Histopathology Services

### At a glance

Histopathology is a subspecialty of Pathology that focuses on the microscopic study of tissue samples in order to diagnose diseases and understand their underlying causes.

#### **Histological Staining**

Staining is widely used in histopathology and diagnosis, as it allows for the identification of abnormalities cell count and in structure under the microscope.

Stains used are Haematoxylin and eosin, Van Gieson, Picric acid, Toluidine blue, Alcian blue, Giemsa, Reticulin, Nissll, Orcein, Sudan black B, Masson's trichrome, Mallory's trichrome, Azan trichrome, Cason's trichrome, PAS (Periodic acid Schiff), Weigert's resorcin fuchsin (Weigert's elastic), Giemsa stain, Aldehyde fuchs

## **Histopathology Services**

- Tissue Fixation and Processing
- Histological Staining
- Immunohistochemistry (IHC)
- Molecular Histopathology
- Forensic Pathology Services
- Research Histopathology

#### **Tissue Fixation and Processing**

Tissue samples are preserved in formalin or similar fixative after collection in order to stop cellular deterioration. To get ready for microscopic inspection, the preserved tissues are dried, embedded in paraffin, and cut into tiny slice.



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# ANALYTICAL TESTING SERVICES

## HIGHLIGHT

- HPLC Analysis
- GC Analysis
- Mass Spectrometry Analysis
- Fluorometric assays
- Colorimetric Services
- Toxicity Analysis



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## HPLC Analysis Services

## At a glance

HPLC is used in separating the components of a compound or mixture.It is a technique used to separate different constituents of a compound using high pressure to push solvents through the column.

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We offer HPLC services to separate, characterise, identify, and quantitate semi- and nonvolatile materials in various sample matrices. Our state-of-the-art HPLC capabilities allow for detection of analytes to trace levels.

## Analysis by HPLC

Method Development: follow We Accuracy, Repeatability/Reproducibility, Precision, Specificity/Selectivity, Limit of Detection (LOD), Limit of Quantitation (LOQ), Linearity, Range, Robustness, System Suitability, Sample Stability for method development.

Fluorescence detectors are highly sensitive detectors best suited for cases where the compounds either are inherently fluorescent, or have been modified to be so. Analysis of Proteins | Peptide | Antibodies etc.



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## **ANALYSIS BY HPLC**

- **Actives Quantification**
- Additives Analysis
- **Taste and Odour Analysis**
- **Antioxidant Analysis**
- **Impurity Analysis**
- **Analytical Method Development**
- **Bio-analytical Method Development**

We have the capability of running normal and reverse phase isocratic or gradient methods utilising multi-wavelength UV/Vis spectrophotometric or diode array detection (DAD) and Fluorescence Detection (FLD)



and cost-effective solutions in scientific research.

#### **Quick Turn-around**

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#### **Technical Support**

We offer custom design for your targeted sequencing projects, data analysis and consulting.

## Gas Chromatography Services

### At a glance

We carried out wide range of projects like; analysis of chemical families pharmaceutical components, flavors and fragrances, additives for polymers and rubber, solvents and bulk chemicals, components of paints and adhesives, herbicides and pesticides, , as well as many other types of molecules with Gas Chromatography.

## Analysis by HPLC

Method Development: We follow Accuracy, Repeatability/Reproducibility, Precision, Specificity/Selectivity, Limit of Detection (LOD) , Limit of Quantitation (LOQ), Linearity, Range, Robustness, System Suitability, Sample Stability for method development.

- Life Sciences Samples
- Food & Beverage Samples
- Clinical Samples
- **Pharmaceutical Samples**
- Food & Beverage Samples



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#### ANALYSIS BY GAS CHROMATOGRAPHY

- Actives Quantification
- Additives Analysis
- **Taste and Odour Analysis**
- **Antioxidant Analysis**
- Impurity Analysis
- **Analytical Method Development**
- **Bio-analytical Method Development**

We follow Repeatability/Reproducibility, Accuracy, Precision. Specificity/Selectivity, Limit of Detection (LOD), Limit of Quantitation (LOQ), Linearity, Range, Robustness, System Suitability, Sample Stability for method development.



#### **Cost Effective Solutions**

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#### **Quick Turn-around**

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#### **Technical Support**

We offer custom design for your targeted sequencing projects, data analysis and consulting.





We are the premier service provider of GC-MS analytical services to the Pharmaceutical, Herbal, Cosmetics, Perfumery, Oil and Biotech industries.

We are comprehensively equipped to analyze samples for volatile or semi volatile in a variety of matrices.Our GC & GC-MS core expertise is in developing and validating robust quantitative methods and then applying those methods to high throughput sample analysis

### Mass Spectrometry Services

We have the full tools necessary to analyse samples for volatile or semivolatile substances in a range of matrices.

Our key competency in GC and GC-MS is the creation and use of reliable quantitative methodologies for highthroughput sample analysis.

- Bio analytical Method Validation
- Method Validation
- Trace Analysis
- Metabolite Analysis



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### ANALYSIS BY MASS SPECTROMETRY

- Mass Spectrometry Analysis Service
- Bio analytical Method Validation
- Method Validation
- Trace Analysis

We follow Accuracy, Repeatability/Reproducibility, Precision, Specificity/Selectivity, Limit of Detection (LOD), Limit of Quantitation (LOQ), Linearity, Range, Robustness, System Suitability, Sample Stability fin our analysis.



#### **Quick Turn-around**

Accelerated turn-around time guarantees that you will get your results as mentioned in contract.



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#### **Technical Support**

We offer custom design for your targeted sequencing projects, data analysis and consulting.



Fluorometric assays are typically far more sensitive than spectrophotometric assays, they may be hampered by impurity interference and the volatility of many fluorescent substances in the presence of light..

#### **Fluorometric Analysis**

Highly sensitive biochemical methods called fluorometric assays are employed to determine whether a certain molecule is present in a sample or how much of it is there. Fluorescence, or the emission of light by a material that has absorbed light or other electromagnetic radiation, provides the basis for these assays.

- Fluorometric Enzyme Assays
- Quantitation of Biomolecules
- Cell Viability and Proliferation
- Fluorescence Binding Studies
- Nucleic Acid Quantification



**ADVANTAGE** 



#### **Cost Effective Solutions**

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#### **Quick Turn-around**

Accelerated turn-around time guarantees that you will get your results as mentioned in contract.

## 2

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### **Technical Support**

We offer custom design for your targeted sequencing projects, data analysis and consulting.

#### **Quantitation of Biomolecules**

Quantitation of biomolecules using a fluorometer involves measuring fluorescence intensity from a fluorescent probe or dye that binds specifically to the target molecule. This technique is highly sensitive and suitable for quantifying DNA, RNA, proteins, or small molecules in various samples.



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C-59, Sector-10, Noida, Uttar Pradesh, India - 201301





Spectrophotometry is an analytical technique used to measure the amount of light absorbed by a sample at specific wavelengths.

This method is fundamental in various fields, scientific including chemistry, biochemistry, and environmental science, due to its precision and versatility.

## **Colorimetric Analysis Services**

This technique provides a non-destructive method for analysing quality, clarity, and purity.

- **Biological Sample**
- **Research Sample**
- Food / Pet Food Sample
- Nutraceutical Product
- **Herbal Product**
- **Pharmaceutical Product**

### **Colorimetric Analysis Services**



#### **Chemical Quantification:**

By measuring the absorbance of light, spectrophotometry can determine the concentration of specific chemicals in a solution, making it invaluable in both research and industrial applications.

#### **Biochemical Analysis:**

Spectrophotometry is extensively used in biochemical experiments involving DNA, RNA, and protein isolation, enzyme kinetics, and other analyses. It allows for the determination of concentrations and purity of these biomolecules



Our team of professionals is capable of developing innovative and cost-effective solutions in scientific research.

### **Quick Turn-around**

Accelerated turn-around time guarantees that you will get your results as mentioned in contract.

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#### **Technical Support**

We offer custom design for your targeted sequencing projects, data analysis and consulting.



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## **Trace Analysis** Services

### At a glance

Our trace analysis lab has the latest analytical equipment that is ideal for trace analysis meaning we can attain detection limits and degrees of precision and our services are reliable and flexible, close coordination with clients, quick service, and as per the modern industry norms..

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### **ANALYSIS OF TRACES**

- Non Volatile Organic Trace Analysis
- Volatile or semi volatile Organic trace analysis
- Elemental / In-organic Trace Analysis
- Impurity Analysis

We are capable in trace analysis in food, pharmaceuticals, cosmetics and biological samples. We have expertise in testing tarces in various chemical and biological matrices.

### Trace Analysis Assay

The commonly used technologies for gmo analysis in foods / agriculture crop are qualitative, quantitative PCR analysis and immunoassay methods.

- **Biological Sample**
- **Research Sample**
- Food / Pet Food Sample
- Nutraceutical Product
- **Herbal Product**
- **Pharmaceutical Product**

## 11 Analysis by GC-Analysis by GC-Analysis by GC-FPD FID NPD ADVANTAGE

#### **Cost Effective Solutions**

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#### **Technical Support**

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## **Toxicity Assay** Services

## At a glance

Our team of analytical chemist and technicians offer laboratories an extensive range of modern and integrated solutions enabling them to automate their analyses whether it be for R&D, processes or quality control.

Our analysis help to ensure the safety of drinking water, monitor the cleanliness of wastewater and analyse soil and air contamination, all to keep our environment at its safest.

#### Genetic Toxicity Analysis

These assays evaluate the potential of a substance to cause genetic damage that could lead to mutations, cancer, or other genetic disorders.

- Ames Test
- **Comet Assay**
- Micronucleus Assay

Immuno-toxicity analysis refers to the study of the potential toxic effects of substances pharmaceuticals, in chemicals, and environmental pollutant on the immune system.

- Cytokine Production Assays
- Lymphocyte Proliferation Assay
- Antibody Production Assays
- Flow Cytometry Analysis
- Immuno Fluorescence Assays

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## TOXICITY ASSAY

- Analytical Toxicology Studies
- Analysis of Chemicals
- **Analysis of Pesticide**
- Heavy Metal Analysis
- **Trace Analysis**
- Determination of toxicity levels
- Toxicology and Ecotoxicology Studies
- In Vitro Toxicity Analysis
- **Immuno Toxicity Analysis** •
- **Genetic Toxicity Analysis**
- **Chemical Toxicity Analysis**





Analysis by Mass Spectrometry

11 Analysis by

Spectrophotome try

ADVANTAGE

#### **Cost Effective Solutions**

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#### **Quick Turn-around**

Accelerated turn-around time guarantees that you will get your results as mentioned in contract.

## **Technical Support**

We offer custom design for your targeted sequencing projects, data analysis and consulting.



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## **TERMS & CONDITIONS**

**SERVICES** :The Sample Submittal Form specifies the service requested by Customer and the information needed by Allele Life Sciences to perform the services. The provision of the Services is governed solely by the terms and conditions of this Agreement. Allele Life Sciences will provide the results in the time requested by Customer, unless otherwise notified by Allele Life Sciences . Customer cannot cancel an order if Allele Life Sciences has commenced the Services. In the event that the Customer has requested a retest of the sample and the repeat testing reveals that the initial result (i) is not the result of laboratory error, failure or omission or (ii) arises from a lack of validation with the product sample matrix and/or extraction method, Allele Life Sciences will charge Customer 75 % of the list price of the procedure utilized. Conversely, if the retest reveals laboratory error, failure or omission, there is no charge for the repeated test.

**PRICING :** The prices for the Services provided Allele Life Sciences shall be determined by the nature of the Services provided and will be agreed upon by Customer and Allele Life Sciences prior to the initiation of the Services.

**PAYMENT:** Allele Life Sciences will charge 75 % in advance against the invoice raised to the customer and remaining 25 % at the time of delivery of results.

**LIMITED WARRANTY:** Allele Life Sciences will examine the samples using techniques in accordance with life sciences / pharmacopoeia monographs, where applicable. In the event that Allele Life Sciences breaches this warranty, Customer's sole remedy is a full refund of the fee for the Services and to have the sample re-analysed at no cost to Customer. The warranty is void if the information provided to Allele Life Sciences in the Sample Submittal Form is not accurate or complete.

**Limitation of Damage:** Allele Life Sciences maximum liability shall not exceed the amount paid for the services .

**Jurisdiction:** Any dispute, claim or controversy between the parties arising out of or relating to this Agreement shall be submitted to the jurisdiction of Delhi court.

**Miscellaneous:** This Agreement and the Sample Submittal Form are the complete and exclusive statement of the agreement between Allele Life Sciences and Customer and supersedes any proposal, prior agreement, oral or written, and any other communications between the parties. The warranty provided in this Agreement is for the benefit of Customer and Customer may not pass the warranty on to any third party.

#### **Signed By Both The Parties**

### NON DISCLOSURE AGREEMENT

It is the desire of the first and second party to have share information and have discussions relative to investigating the feasibility and advisability of preparing and conducting clinical studies or any other business related activities. In the course of those discussions, both parties may be disclosing to each other, information regarded as being confidential or proprietary. For purposes of this Agreement, all information exchanged which is regarded as confidential or as being otherwise proprietary in nature shall be collectively referred to herein as "Confidential Information." The existence of this Agreement and the terms set forth herein shall be considered Confidential Information. Accordingly, for mutual protection, we ask that this Agreement be reviewed and executed prior to exchanging any Confidential Information by meeting or by any other arrangement. It is understood that all Confidential Information provided pursuant to the terms hereof, which the disclosing party regards as being confidential or proprietary, shall be identified or marked as "Confidential." Oral disclosures of Confidential Information shall be confirmed by reducing the disclosures to writing and providing the writing to the receiving party within thirty (30) days from the date of the oral disclosure. With respect to all Confidential Information disclosed to each other by both parties, during the term of this Agreement, the party receiving same hereby agrees to keep, hold, and maintain in confidence all such Confidential Information, of every kind and character, and not to disclose, directly or indirectly, to any third party, or otherwise make use of said Confidential Information other than as contemplated by this Agreement, without the prior written consent of the disclosing party, except that the receiving party may disclose Confidential Information to those of its agents, consultants, and legal and financial advisors (collectively "Representatives") who have a need-to-know such information for the purposes hereof and who are bound by like obligations of confidentiality and non-use. The obligations of confidence and non-use assumed by both parties to this agreement, hereunder shall not apply to: • information which at the time of disclosure is in the public domain; or • information which thereafter lawfully becomes a part of the public domain other than through disclosure by or through the receiving party; or • information which is already in the possession of the party receiving same as shown by its written record; or • information which is lawfully disclosed to either party by a third party not under an obligation of confidentiality to the disclosing party with respect to said Confidential Information; or information which is subsequently developed by an employee or agent of the receiving party without actual knowledge of the disclosure; or • information which the receiving party must disclose pursuant to applicable laws, regulations or court order, provided that the receiving party gives the disclosing party reasonable notice of its intent to disclose such information. information which is disclosed by the recipient with the written approval of either of the aforesaid parties. Neither party shall use the name of the other party in any discussions with third parties (other than Representatives), advertising, press release, sales literature, or fundraising efforts without the prior written consent of the other party. In the event the disclosing party gives the receiving party prior written consent to disclose Confidential Information received from the disclosing party to any third party, other than Representatives, the receiving party hereby agrees to obtain written agreements from any such third party to whom the receiving party discloses such information, similar in form and substance to this Confidentiality Agreement, for the benefit of the disclosing party. This Agreement is entered for a period of three (3) years from the date of signing of this agreement and is governed by and shall be construed in accordance with the laws of India.

## SAMPLE ANALYSIS REQUEST

## PERSONAL INFORMATION

Full Name (PLEASE USE CAPIT,	AL)	:	
Address	:		
Phone Number	:		E-Mail :

## SAMPLE INFORMATION

S/N	ANALYSIS REQUIRED	SAMPLE INFORMATION	QUANTITY	MSDS

#### **ANALYSIS INSTRUCTION**

## OFFICE USE ONLY

THANK YOU

Date	:	Received By	:
Forwarded to	:	Copy to	:
		We will send you review of your as	Quotation after technical signment.

## MATERIAL SAFTEY DATA SHEET

	DESCRIPTION OF SAMPLES	COMMENT
1.	MATERIAL COMPOSITION/LIST OF INGREDIENTS?	
2.	IS LICENSE REQUIRED TO HANDLE SAMPLE ?	
3.	IS THE SAMPLE A BIOLOGICAL AGENT?	
4.	IS SAMPLE RADIOACTIVE?	
5.	PHYSICAL CHARACTERISTICS?	
6	HAZARD/TRANSPORTATION LABELS?	
/.	DOES YOUR INSTITUTION SPECIFY ANY SPECIFIC PERSONAL PROTECTIVE EQUIPMENT (PPE) TO YOUR STAFF FOR HANDLING SAMPLE(S)?	
0	DOES YOUR COMPANY SPECIFY ANY SPECIFIC SAMPLE CONTAINMENT?	
9.	DOES YOUR COMPANY SPECIFY ANY SPECIFIC SAMPLE CONTAINMENT?	

## OTHER INSTRUCTION

Customer Name :

## Allele Life Sciences



# **Contact Us**

## **ALLELE LIFE SCIENCES PVT. LTD**

C-59, Sector-10, Ind. Area, NOIDA, Uttar Pradesh -201301

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