



Organisation For Contract Lab Analysis, Analytical Testing and Consulting

Introduction

Allele Life Sciences is Professionally Managed Organisation, incorporated for life science research support composed of scientists, professionals, volunteers and citizens committed to the advancement of science in India and with promoting chemical and biological sciences.

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, Bio-Chemist, Analytical Chemists and Pharmacognosists.



Scientific Advisory & Team Members

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.

Our 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 Commitment

Allele Life Sciences 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.

Allele Life Sciences Instruments Capabilities

- ▶ HPLC with PDA, FLD & ECD Detectors
- ▶ Preparative HPLC with Binary Pump LC-MS
- ▶ Gas Chromatography with FID, FPD & NPD Detectors
- ▶ Triple Quad GCMS with headspace technology
- ▶ LC-MS-MS
- ▶ Protein Purification System
- ▶ Protein Purification System for Affinity Chromatography
- ▶ 2-D Electrophoresis system
- ▶ Real Time PCR & PCR Systems
- ▶ Microarray Platform
- ▶ UV-Vis spectrophotometers
- ▶ Micro-plate Reader
- ▶ Karl Fisher Titrator
- ▶ Dissolved Oxygen Meter
- ▶ Ion Meter with various electrodes
- ▶ Viscometers
- ▶ Melting point apparatus
- ▶ Refractometer
- ▶ Immunoassay
- ▶ Polarimeter
- ▶ Hardness tester
- ▶ Microbiological Laboratory
- ▶ Potentiometer
- ▶ Vacuum Rotatory Evaporator
- ▶ Milli-q Water Purification





Ordering Information for the India

Telephone Orders and Inquiries :

To telephone an order within the India please call : 0120 - 2540133 , 9891179928
International +91(0)120- 2540133 , +91 - 9891179928

Fax

India 0120 - 3146144
International +91(0)120-3122188

E.mail: mail@allelelifesciences.com

Mail : Allele Life Sciences , C - 59 , Sector - 10 , Noida , Uttar Pradesh - 201301 ,

Required Information:

India Please include the following details when placing an order: Contact Name Delivery Address ,
Purchase Order Number , Telephone Number

Tel : + 91- 0120 - 2540133 **Fax :** +91-0120 - 3146144
E-mail : mail@allelelifesciences.com , www.allelelifesciences.com

Service Catalogue 2019 - 2020 Highlights



Molecular Biology Services

Page No 6 to 14

- DNA, RNA , Plasmid & cDNA Synthesis
- PCR & Real Time PCR Services
- Sequencing Services
- Cloning & Mutagenesis
- Genotyping & Barcoding
- Meta Genomic Analysis



Protein Analysis Services

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- Protein Extraction
- Protein Purification
- Protein Analysis
- Protein Electrophoresis
- Antibodies Purification
- Amino Acid Analysis



Bio-Assay Analytical Services

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- Antioxidant Assay Services
- Enzyme Analysis
- Geno-toxicity Analysis
- Eco-toxicity Analysis
- Industrial Effluent Toxicity Analysis



Analytical Services

Page No 27 to 33

- HPLC Analysis & Method Development
- GC Analysis & Method Development
- Mass Spectrometry Analysis & Method Development
- Herbal Analysis
- Fragrance - Perfume Analysis

MOLECULAR BIOLOGY SERVICES



- ❖ DNA, RNA, Plasmid & cDNA Synthesis
- ❖ PCR & Real Time PCR Services
- ❖ Cloning & Mutagenesis
- ❖ Sequencing Services
- ❖ Genotyping & Barcoding
- ❖ Meta Genomic Analysis



NUCLEIC ACID EXTRACTION

The first step in any study investigating genetic differences in an organism of interest is the purification of the nucleic acid extraction. We at Allele Life Sciences provides DNA and RNA extraction services to meet the demands of any project.

Our range of nucleic acid extraction services includes high quality DNA and RNA extraction solutions for wide array of molecular biology applications.



OUR ADVANTAGE :

- ❖ Cost-effective services
- ❖ Extensive experience isolating DNA, total RNA, mRNA and miRNA
- ❖ Extensive expertise in extraction procedures
- ❖ Dried in SpeedVac, Quality Control in Bio-analyser (Agilent)
- ❖ High-throughput
- ❖ Best customer service

DNA EXTRACTION SERVICE :

Type of Material	Input	Yield	Application
Blood	1 ml	5 ug	All DNA Applications
Tissue	30 - 35 mg	5 - 10 ug	All DNA Applications
Plants	50 mg	5 - 10 ug	All DNA Applications
Saliva	500 ul	2 ug	All DNA Applications
Bacteria	1 ml	5 - 10 ug	All DNA Applications

RNA EXTRACTION SERVICE :

Type of Material	Input	Yield	Application
Blood	1 ml	5 ug	All DNA Applications
Tissue	30 - 35 mg	5 - 10 ug	All DNA Applications
Plants	50 mg	5 - 10 ug	All DNA Applications

- Extraction of Nucleic Acids for Forensic Sample Analysis
- mRNA & miRNA Purification Service is available

PLASMID DNA PREPARATION

Plasmid DNA Preparation service are critical factors for any plasmid purification procedure.

Our Plasmid DNA Preparation teams provide high quality plasmid with reliable, microgram to milligram range. We provide our best for a reliable and satisfying experience for our customers.



OUR SERVICES

Our experienced scientists are committed to deliver large and small scale sequencing projects.

- ❖ **Flexible Plasmid Preparation**
- ❖ **Extremely low levels of endotoxin**
- ❖ **Cost Effective & Quality Assured**
- ❖ **Flexible sample formats**

SCALE	CULTURE VOLUME	Yield
Mini Prep	5 to 10 ml	1.5 ug to 5 ug
Midi Prep	50 to 100 ml	15 ug to 50 ug
Maxi Prep	100 to 250 ml	100 ug to 500 ug
Mega Prep	500 ml to 2.5 L	500 ug to 2.5 mg

PLASMID SERVICE APPLICATIONS :

We undertake the whole project for plasmid preparation services . We follow the standard protocols for different arrays for plasmid preparation :

- ❖ **PCR & Sequencing**
- ❖ **Molecular Cloning**
- ❖ **Mutagenesis & Library Construction**
- ❖ **Hybridisation & Labelling**
- ❖ **Immunisation studies**
- ❖ **Preclinical studies**

When requesting a quote for the plasmid DNA preparation services, please specify:

- ❖ **Quantity of plasmid DNA :** Starting anywhere from 10 µg to 10 mg (high-copy)
- ❖ **Storage condition:** water, TE buffer or dry
- ❖ **Quality grade:** Research Grade or Transfection Grade

RNA EXTRACTION & cDNA SYNTHESIS

Extracting nucleic acids of high quality is essential for any downstream analysis. We have extensive experience of extraction of nucleic acids (RNA, miRNA, DNA) from a wide range of samples types deriving from a great variety of organisms. RNA can be detected, quantified and manipulated through copying via the use of reverse transcriptase, which are RNA-dependent DNA polymerases. reverse transcriptase synthesise a strand of DNA that is complementary to the original RNA template and is referred to as cDNA .



OUR SERVICES

Our experienced scientists are committed to deliver large and small scale sequencing projects.

- ❖ **Total RNA Extraction**
- ❖ **Quantitative Analysis of RNA**
- ❖ **mRNA Purification**
- ❖ **cDNA Synthesis**
- ❖ **Strict quality control**
- ❖ **DNA and RNA are Free of Proteins and other Contaminants**

Custom RNA Isolation Services : Starting from your biological samples. we will isolate high quality RNA that will be suitable for RT-PCR and cDNA library constructions. For quality control purposes, isolated RNA is run on agarose gel. We also provide A260 and A280 data.

Custom mRNA Isolation Services : we will isolate high quality mRNA that will be suitable for RT-PCR, cDNA library constructions. For quality control purposes, isolated mRNA is run on agarose gel. We also provide A260 and A280 data.

High Quality cDNA Synthesis : Gene synthesis is the most efficient means of obtaining high-quality cDNA or library constructs. The method combines cDNA synthesis and amplification.

First strand cDNA : 0.1 micrograms of RNA. || **Second strand cDNA**

Our Advantage :

- ❖ State-of-the-art lab with sophisticated equipment facility
- ❖ Competent, Qualified and Experienced analysts
- ❖ Fast turn-around time
- ❖ Results you can rely on

PCR & REAL TIME PCR ANALYSIS

Allele Life Sciences offers PCR & Real Time PCR services and other tools specifically for genotyping and genetic variation research, from isolating and purifying genomic DNA, selecting probe and primers, DNA amplification, performing allelic discrimination, and analysing data. We provide our best for a reliable and satisfying experience for our customers.



SERVICES WE OFFER:

Our experienced scientists are committed to deliver best PCR and Real Time PCR projects.

- ❖ **Molecular Diagnostics - PCR & Q-PCR Analysis**
- ❖ **Genetic Variation Analysis**
- ❖ **Mutation Detection / G.M.O Analysis**
- ❖ **microRNA & Noncoding RNA Analysis**
- ❖ **Protein Analysis Using Real-Time PCR**
- ❖ **Allelic discrimination run**
- ❖ **Real Time PCR Plate run**
- ❖ **DNA / RNA Isolation , quantitation, and Quality Assessment**
- ❖ **Reverse transcription**
- ❖ **Primer design, synthesis, and validation**
- ❖ **Real-time PCR assays (SYBR-green and Taq Man)**
- ❖ **Data Analysis**

OUR REAL TIME PCR SERVICE ADVANTAGE :

We undertake the whole project for PCR & Q-PCR services . We follow the standard protocols for different arrays for analysis :

- ❖ **Reliable Data**
- ❖ **Quick Turnaround**
- ❖ **Capacity to run 300 sample / day**
- ❖ **Platform - ABI 7900, Eurofins, Biorad**

Data Analysis

Data analysis services include delta-delta Cts values and graphical presentation of genes with unique expression and differential regulation patterns.

SEQUENCING PROJECTS

Allele Life Sciences provides DNA sequencing services with innovative instruments and reagents.

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.



SERVICES WE OFFER

Our experienced scientists are committed to deliver large and small scale sequencing projects.

- ❖ **Primer Walking Service**
- ❖ **16/18s rRNA sequencing Analysis**
- ❖ **Difficult DNA Templates Sequencing**
- ❖ **Cloning Service For Sequencing Projects**
- ❖ **SNP Discovery Service**
- ❖ **Mutagenesis Sequencing Service**
- ❖ **Real Time PCR Analysis**
- ❖ **Microarray Analysis**

OUR SEQUENCING SERVICE ADVANTAGE :

We undertake the whole project for sequencing services . We follow the standard protocols for different arrays for sequencing :

- ❖ **Nucleic Acid Extraction & Quality Analysis**
- ❖ **PCR Amplification & Purification**
- ❖ **Primer Design & Synthesis**
- ❖ **Plasmid DNA Preparation**
- ❖ **Cloning & Sub Cloning**
- ❖ **Mutagenesis of target gene, sub-clone to customer provided vector**
- ❖ **Sequencing using designed primer**

Data Analysis

This option authorises ALS/CGRF to review the chromatogram, manually edit sequencing results and deliver aligned format. Sequencing results will be aligned with reference sequence if submitted.

CLONING & MUTATION SERVICE

We offer Gene Cloning Services using any DNA sequence of your specification. We will design primers for PCR amplification of the desired sequence from your DNA source.

The PCR product will be cloned directly into a T/A cloning vector or digested with restriction enzymes.



CLONING SERVICES

Our experienced scientists are committed to deliver best cloning and expression projects.

- ❖ **High Quality cDNA Synthesis;First strand cDNA : 0.1 micrograms of RNA. ||
Second strand cDNA**
- ❖ **Site Directed Mutagenesis**
- ❖ **RACE Cloning Service**
- ❖ **PCR Cloning & Sub Cloning**
- ❖ **Cloning of synthetic gene**

OUR ADVANTAGE :

We undertake the whole project for cloning services . We follow the standard protocols for different arrays for analysis :

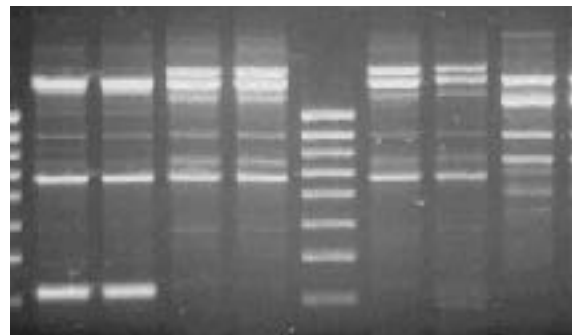
- ❖ **Reliable verification of clones by sequencing**
- ❖ **High throughput and multiple fragment cloning**
- ❖ **In-house construction and Plasmid purification**
- ❖ **Template DNA or RNA, or their description**
- ❖ **Sequence and description of the DNA to be cloned.**
- ❖ **Vector description**
- ❖ **Primer design for PCR or RT-PCR**
- ❖ **Cloning into the vector of your choice.**
- ❖ **Sequencing of target DNA in both directions.**

VERIFICATION OF CLONING :

We provide high quality cloning service at very competitive price. All clones are sequenced verified and guaranteed error-free.

GENOTYPING & DNA BARCODING

Allele Life Sciences services include RAPD, SSR , ISSR , SNP, STR and RFLP , Barcoding based methods to fingerprint (genotype) individuals. The genotypic information is used for plants , bacterial ,animal identification, paternity analysis, and forensic analysis . We provide our best for a reliable and satisfying experience for our customers.



GENOTYPING ANALYSIS SERVICES

Our experienced scientists are committed to deliver reliable and reproducible data through molecular marker analysis.

SERVICES WE OFFER :

- ❖ DNA extraction from blood, plants, tissue, etc.
- ❖ PCR assay design and validation for molecular markers
- ❖ Inventory with wide range of molecular markers
- ❖ In-silico analysis of molecular markers
- ❖ Reproducible Data
- ❖ Data analysis and comparison with reference samples

GENOTYPING ANALYSIS :

We undertake the whole project for sequencing services

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

OUR SOLUTIONS :

We undertake the whole project for genotyping services

- ❖ Microsatelite Analysis
- ❖ DNA Barcoding
- ❖ Copy Number Variation Analysis
- ❖ DNA sample identification

META-GENOMICS ANALYSIS

Meta genomics is the study of genomic content in a complex mixture of microorganism. We provide meta genomics services for Biotech , Environmental , Medicine , Agriculture , Bio-Energy Microbial Forensic Research and analyse a diverse variety of samples and sample matrices.

16S rDNA based molecular identity || RFLP based molecular protocol || Identification of bacteria in a consortium || Phylogenetic Traits



OUR SERVICES

The primary goals of Meta-Genomics are to characterise the organisms present in a sample and to identify what roles these organism may have within a specific environment. Using NGS it is possible to study microbial communities by sequencing the gene of choice (e.g. 16S, V3, V4 regions) or the whole genome or transcriptome without the need for culturing:

TAXONOMIC PROFILING :

Microbial communities can be characterised by sequencing hyper-variable regions of 16s / 18s rRNA. We provide 16s / 18s rRNA microbial identification services for research projects .

16s/18s rRNA based molecular identity || Identification of bacteria in a consortium || Phylogenetic Tree

WHOLE GENOME SHOTGUN SEQUENCING

Metagenomic Whole Genome shotgun sequencing helps to evaluate and to detect the abundance of microbial diversity under various conditions. It can provide information not only on species composition and abundance, but also on functional genes, gene differences between samples, metabolic pathways and gene resource mining for bioactive products.

PROTEIN ANALYSIS SERVICES



- ❖ Protein Extraction
- ❖ Protein Purification
- ❖ Protein Analysis
- ❖ Protein Electrophoresis
- ❖ Antibodies Purification
- ❖ Amino Acid Analysis



PROTEIN EXPRESSION & EXTRACTION

We listen to your requirements, understand your purposes, discuss with you about the possibilities, design and optimise the strategies, and walk you through your research projects. Your *custom protein expression* will be optimised by engineering an expression construct with a codon-optimised DNA insert, a strong promoter, an efficient ribosome binding site, a high copy number and combining it with an appropriate host.



SERVICES

Steps	Process	Details
Step-1	Insilico Designing	Bioinformatics analysis of Gene of Interest
Step-2	Codon Optimisation	Selection of Plasmid, Vector and Gene Synthesis
Step-3	Cloning & Sub cloning	Sub Cloning into suitable expression vector
Step-4	Cell Transformation	Transformation into an appropriate host
Step-5	Screening Studies	Screening for the best expressing protein variant
Step-6	Protein Production	Expression Evaluation & Optimisation of protein
Step-7	Quality Control Analysis	SDS - PAGE Analysis & Q.C Report
Step-8	Protein Characterisation	Analysis by ELISA, Western Blot (Client Specification)

OUR PACKAGE INCLUDE:

- ❖ All clones and sub-clones generated
- ❖ All-inclusive from cloning to purification
- ❖ Sequence data of the final clone
- ❖ Guaranteed yield: 3 mg purified protein
- ❖ Guaranteed purity: > 75 % protein purity
- ❖ Quality assurance certificate
- ❖ Pay only when we succeed!

AVAILABLE FOR ADDITIONAL COST :

- ❖ **Sequence Verification by Mass Spectrometry**
- ❖ **Endotoxin Quantification**
- ❖ **Endotoxin Removal**

PROTEIN PURIFICATION SERVICES

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 Allele Life Sciences.



SERVICES WE OFFER :

- ❖ **Affinity Chromatography (IMAC, GST Tagged Purification, Talon resin, Glutathione Sepharose, Heparin Sepharose, Streptavidin Sepharose, anti-Flag, Protein A, Protein G)**
- ❖ **Ion Exchange Chromatography (Mono-Q, Q Sepharose Fast Flow, Resource Q, Q Sepharose XL, ANX, DEAE Sepharose, SP Sepharose, CM Sepharose)**
- ❖ **Hydrophobic Interaction Chromatography Phenyl and (CH₂)_n Sepharose)**
- ❖ **Size Exclusion Chromatography**

Endotoxin Removal Service: We at Allele Life Sciences manage endotoxin removal from the first purification step. Starting with exhaustively cleaned and validated equipment, we use detergent-free chromatography methods to lower endotoxin levels.

WE DELIVER :

All custom purified proteins are supplied to the following:

- Specified protein concentration
- Special formulation to prevent protein from degradation
- Custom aliquoting as specified by customer
- Vigorous QA/QC to ensure the highest quality and reproducibility
- Certificate of analysis as specified by customer

EQUIPMENT AVAILABLE FOR PURIFICATION

- Akta Prime FPLC in temperature controlled environment
- Biorad Profinia For Affinity Purification
- Preparative HPLC
- Agilent HPLC

PROTEIN ANALYSIS SERVICES

Protein quantification is necessary to understand the total protein content in a sample. Careful selection of the protein quantification method is required to ensure accurate data .

Our scientists are experts in the selection of protein quantification assays and committed to deliver the best and reliable data to our clients.



SERVICES WE OFFER :

- ❖ Total Protein Estimation by BCA / Bradford Assay
- ❖ Absolute Quantification of purified protein
- ❖ Relative Quantification of protein in mixture
- ❖ Absolute Qualification of single protein in mixture
- ❖ Quantitative Analysis of amino acids
- ❖ Purity Analysis by RP- HPLC
- ❖ Protein identification by Ion Exchange Chromatography
- ❖ Protein identification by size exclusion chromatography
- ❖ Protein deglycosylation analysis
- ❖ Spectrofluorometric characterisation

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- Special formulation to prevent protein from degradation
- Custom aliquoting as specified by customer
- Vigorous QA/QC to ensure the highest quality and reproducibility
- Certificate of analysis as specified by customer

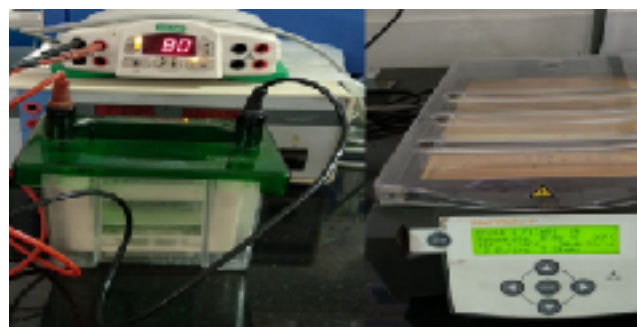
EQUIPMENT AVAILABLE FOR QUANTITATION

- Agilent / Varian UV-Vis Spectrophotometer
- Thermo Helios Spectrophotometer
- Agilent HPLC

PROTEIN ELECTROPHORESIS

We listen to your requirements, understand your purposes, discuss with you about the possibilities, design and optimise the strategies, and walk you through your research projects.

A successful protein electrophoresis relies on optimised protocols. Depending on the requirements and nature of the protein, targeted experimental protocols can be developed .



SERVICES WE OFFER :

- Protein SDS-PAGE Gel Electrophoresis
- Iso Electric Point
- 2-D Gel Electrophoresis
- Western Blot Analysis
- Image Analysis

Common Stains and Dyes used for 2D SDS PAGE

Stain / Dye	Associated Residue	Sensitivity	MS Compatibility
Coomassie Blue	Arginine Lysine	Good	Good
Deep Purple	Primary Amines	Excellent	Good
Sypro Ruby	Primary Amines	Excellent	Good
Minimal Cy	Lysine	Excellent	Challenging

WE DELIVER :

All custom purified proteins are supplied to the following:

- Specified protein concentration
- Special formulation to prevent protein from degradation
- Custom aliquoting as specified by customer
- Vigorous QA/QC to ensure the highest quality and reproducibility
- Certificate of analysis as specified by customer

EQUIPMENT AVAILABLE FOR PURIFICATION

- GE-Amersham Electrophoresis For Iso Electric Focusing (IEF)
- Biorad Power-pac HV (upto 5000 Volts)
- Western Blot Assembly
- SDS-PAGE Assembly

ANTIBODY PURIFICATION SERVICES

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 $(\text{NH}_4)_2\text{SO}_4$ salt precipitation, ion exchange and size exclusion chromatography, IMAC, GST, Protein A and Protein G affinity chromatography, and custom affinity chromatography.



OUR SERVICES:

Affinity purification permits isolation of antibodies against the immunising antigen, thereby eliminating cross-reactivity that would be present in un-purified 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.

ANTIBODY PURIFICATION :

- » **Ammonium Sulphate Precipitation**
- » **Purification by Affinity Chromatography**
- » **Size Exclusion Chromatography**
- » **Ion Exchange Chromatography**
- » **Recombinant Protein Purification**

OUR CAPABILITIES:

We carry out various methods to purify antibodies ranging from poorly to highly specific ones . The purification of antibodies using affinity chromatography, size exclusion, ion-exchange chromatography with dedicated matrix and purification columns.

Purification of antibodies is performed with HPLC UV & Fluorescence detector, Biorad FPLC / HPLC System by using classical ionexchange liquid chromatography with Sepharose, GST , IMAC etc.

AMINO ACID ANALYSIS

Amino acid analysis is a biochemical technique used for the determination of the amino acid composition or content of proteins, peptides and other pharmaceutical or biological preparations. During Amino Acid Analysis, proteins and peptides are hydrolysed to their component amino acids which are then separated by HPLC, detected by UV or fluorometry and quantitated.



SERVICES WE OFFER :

- Amino acid profile
- Amino acid profile with hydroxyproline and taurine
- Aromatic amino acids (AAAs) are amino acids; Tryptophan, Phenylalanine, and Tyrosine
- High sensitivity AAA
- Total Cys (cysteine + cystine) analysis
- Amino Sugar Analysis
- Standard protein hydrolysate
- Physiological or plasma amino acid profile
- Free amino acid profile
- Aminothiols analysis
- Glutamine/Asparagine Analysis
- Urine, Free form AAA
- Other Amino Acids

WE OFFER SERVICES FOR:

We provide amino acid analysis services for Physiological, metabolic samples, Food products, Dairy products, Food stuffs, Raw materials, Pharmaceutical products, Synthetic peptides, Waste products, Plants etc.

AMINO ACID ANALYSIS PROCESS:

- Hydrolysis
- Derivatization
- Separation of derivatized amino acids
- Data Interpretation and calculation

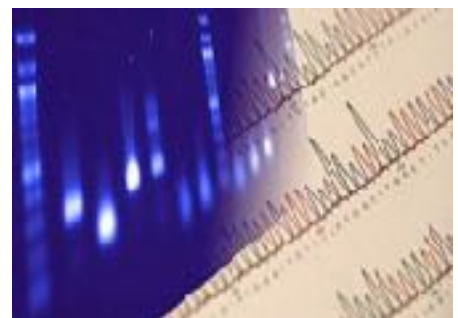
EQUIPMENT AVAILABLE FOR PURIFICATION

- Agilent HPLC with Binary Pump, Autosampler and UV-Vis PDA Detector
- Agilent HPLC with Binary Pump, Autosampler and FLD Detector
- Preparative HPLC
- Low Pressure LC for Ion Exchange Chromatography

BIOASSAY ANALYTICAL SERVICES



- **Genotoxicity Analysis**
- **Eco Toxicity Analysis**
- **Industrial Effluent Analysis**
- **Anti Oxidant Assay**
- **Enzyme Analysis Services**



GENOTOXICITY ANALYSIS

Toxicity and Genetics Genotoxicity describes the property of chemical agents that damages the genetic information within a cell causing mutations and DNA methylation, which may lead to cancer. It is very pathetic that population in rural or urban areas are not aware of the genetic changes due to intake of toxic substances . Several of families are suffering from cancer and other genetic diseases.



SERVICES WE OFFER :

- ❖ Chemical Carcinogenesis
- ❖ Mechanisms of chemical carcinogenesis and genetic toxicity
- ❖ Gene-environment interactions in carcinogenesis
- ❖ Epigenetic Analysis
- ❖ Genetic Toxicology and Ecotoxicology

COMET ASSAY :

DNA strand breakage assay also known as single cell gel electrophoresis assay is a sensitive and rapid test for quantifying and analysing DNA damage in individual cells.

DNA METHYLATION ANALYSIS :

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

- » Methylation Analysis by Gene Specific PCR
- » Methylation Analysis by Real Time PCR
- » Sequence Analysis

GENETIC MUTATION ANALYSIS :

Characterising mutations is an important technique in the molecular biology techniques. Our Mutation Analysis service helps researchers for mutation detection in coding exons, enabling researchers to quickly analyse and identify mutations that may affect the function of their gene of interest.

- » Mutation Detection by PCR
- » Mutation Analysis by Real Time PCR
- » Sequence Analysis

BIO TOXICITY ANALYSIS

To ensure successful method development there is a requirement for highly skilled analytical judgement. The 'purpose' of the method needs to be determined with some clarity and thoroughness as this will ultimately determine the long-term success of the new method . We provide our best for a reliable and satisfying experience for our customers.



SERVICES WE OFFER :

- ❖ Microbial and Metagenomics Analysis
- ❖ Analysis of Chemicals
- ❖ Analysis of Pesticide
- ❖ Heavy Metal Analysis
- ❖ Trace Analysis

MICROBIOLOGY ANALYSIS :

We analyse microbial flora in different type of array ; soil, water, industrial effluent, river water, fuel, biofertiliser etc.

- » Water Microbiology & Analysis
- » Industrial Hygiene Testing
- » Meta-genomics Analysis

TOXICOLOGY ANALYSIS :

- » Determination of toxicity levels in soils and liquids
- » Industrial Effluents Analysis
- » Environmental Toxicology Screening
- » Toxicology and Ecotoxicology Studies

WATER ANALYSIS & WASTE CHARACTERISATION :

- » Concentrations of harmful substances in waste
- » Verification of hazardous properties
- » Waste Testing
- » Analysis of Preservatives

BIO FUEL ANALYSIS :

- » Volatile & Semi Volatile Compound Analysis
- » Trace Elements Analysis

INDUSTRIAL EFFLUENT ANALYSIS

Industrial pollution, particularly, surface water results from all activities of man involving indiscriminate waste disposal from industry such as effluents into waterways, waste, agricultural waste, and all forms of man's activities that results in contamination of the surface water.

Pollution is caused when a change in the physical, chemical or biological condition in the environment harmfully affect quality of human life including other animals



SERVICES WE OFFER :

- ❖ Microbial and Metagenomics Analysis
- ❖ Analysis of Chemicals
- ❖ Analysis of Pesticide
- ❖ Heavy Metal Analysis
- ❖ Trace Analysis

PHYSICOCHEMICAL ANALYSIS:

We have facility to analyse the samples for pH, temperature, electrical conductivity Dissolved oxygen, organic matter, total dissolved solids (TDS), Total suspended solids (TSS), total solids (TS), organic carbon, chemical oxygen demand (COD), chlorinity, calcium, magnesium, sodium, potassium, ammonium, sulphate, nitrate, phosphate and bicarbonate, biological oxygen demand (BOD) etc.

SOIL & CONTAMINATED LAND ANALYSIS :

We provide a broad spectrum of analytical services for contaminated land for toxicity profiling of soil , plant and animals.

WATER ANALYSIS & WASTE CHARACTERISATION :

We can provide a tailored waste discharge report covering all the typical contaminants limited and controlled by the waste sewage undertakers:

- ❖ Concentrations of harmful substances in waste
- ❖ Verification of hazardous properties
- ❖ Waste Testing
- ❖ Analysis of Preservatives
- ❖ Toxic Metals
- ❖ Flammable Substances
- ❖ Phenols
- ❖ Dyes

ANTI-OXIDENT ASSAY

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



Antioxidant Activity Assay:

- DPPH Antioxidant Assay
- Oxygen Radical Capacity Antioxidant (ORAC) Assay
- Total Antioxidant Capacity (TAC) Assay
- Ferric Reducing Antioxidant Power (FRAP) Assay
- ABTS Assay

Antioxidant Enzyme Activity Assay:

- Superoxide dismutase (SOD)
- Catalase
- Glutathione reductase (GR)
- Glutathione peroxidase (GPx)
- GSH/GSSG ratio

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.

TECHNOLOGIES AND FACILITIES

Analysis by GC-MS-MS, Triple Quadrupole, Gas Chromatograph (FID, FPD and NPD Detectors), Analysis by LC-MS-MS, Analysis by HPLC - PDA, FLD Detectors, UV-Visible spectrophotometer

ENZYME ANALYSIS SERVICES

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. The expert team of Allele Life Sciences, complemented by our state-of-the-art lab facilities, supports customers with the highest standards of quality, technical analysis, and data management.



SERVICES WE OFFER :

- **Molecular weight determination by SDS-PAGE & Western Blot**
- **Measurement of enzyme concentrations by ELISA & BCA Assay**
- **Assessment of enzyme purity by SDS-PAGE & HPLC**
- **Kinetics study of enzyme**
- **Amino-terminal sequence analysis**
- **Enzyme activity assay**
- **Detection of endotoxin & Mycotoxin level**
- **Inhibitors and activators characterisation**

Microbiology of Enzymes : We perform analytical testing for Yeast & Molds, E.Coli, Salmonella, Antibiotic Activity etc.

Heavy Metal Analysis ; We perform quality testing for lead, arsenic, mercury, zinc, cadmium etc.

WE TEST:

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

TECHNOLOGIES AND FACILITIES

Analysis by FPLC, LPLC, ELISA, Q-PCR, GC-MS-MS, Triple Quadrupole, Gas Chromatograph (FID, FPD and NPD Detectors), Analysis by LC-MS-MS, Analysis by HPLC - PDA, FLD Detectors, UV-Visible spectrophotometer

ANALYTICAL TESTING SERVICES



- **Fragrance & Flavour Analysis**
- **Essential Oil Analysis**
- **Fragrance Development**
- **Flavour Development**
- **Fragrance Biotechnology**



HPLC SERVICES

To ensure successful method development there is a requirement for highly skilled analytical judgement. The 'purpose' of the method needs to be determined with some clarity and thoroughness as this will ultimately determine the long-term success of the new method . We provide our best for a reliable and satisfying experience for our customers.



SERVICES WE OFFER :

Our experienced scientists are committed to deliver reliable and standard data for HPLC services.

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

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.

ADVANTAGE :

We undertake the whole project for sequencing services

- **HPLC with UV-Vis, PDA, FLD & ECD Detector**
- **Preparative HPLC with PDA**
- **Ion Exchange & Affinity Chromatography System**

HPLC ANALYTICAL METHODS:

We use the following analytical methods for HPLC Analysis :

- **Normal Phase Chromatography**
- **Reverse Phase Chromatography**
- **Ion Exchange Chromatography**
- **Size Exclusion Chromatography**
- **Chiral Chromatography**

GAS CHROMATOGRAPHY SERVICES

To ensure successful method development there is a requirement for highly skilled analytical judgement. The 'purpose' of the method needs to be determined with some clarity and thoroughness as this will ultimately determine the long-term success of the new method . We provide our best for a reliable and satisfying experience for our customers.



SERVICES WE OFFER:

Our experienced scientists are committed to deliver reliable and standard data for GC services.

- **GC Analysis**
- **Analytical Method Development**
- **Bio analytical Method Development**
- **Accurate, Precise, Reproducible Methods**

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.

ADVANTAGE :

We undertake the whole project for sequencing services

- **GC with FID, FPD & NPD Detectors**
- **Multiple Platforms - Agilent & Shimadzu**
- **Inventory for standards**
- **Periodic Calibration**

WE SERVE FOR :

We carried out wide range of projects like; analysis of chemical families , pharmaceutical components , flavour 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.

MASS SPECTROMETRY SERVICES

We provide an extensive range of mass spectrometry analytical instruments and expertise for client testing and research projects. We analyse a diverse variety of samples and sample matrices. We analyse trace-level molecular characterisation of many sample types and is a powerful analytical tool for trace and ultra-trace analysis, unknowns identification, and many other.



MASS SPECTROMETRY ANALYSIS

Our experienced scientists are committed to deliver reliable and standard data for mass spectrometry services.

SERVICES WE OFFER :

- Analytical GC-MS Service
- Analytical LC-MS Services
- Bio analytical Method Validation
- Method Validation
- Trace Analysis

ADVANTAGE :

- Unknown Component Identification
- GC-MS Analysis for Chemical Assay
- Additives Analysis
- Method Development for critical sample
- Volatile Organic Compound (VOC) Testing
- Residual Monomer Detection

WE SERVE FOR :

We provide analytical services to the Pharmaceutical, Herbal, Cosmetics, Perfumery, Oil and Biotech industries and Research.

TECHNOLOGIES AND FACILITIES

Analysis by GC-MS-MS, Triple Quadrupole, Gas Chromatograph (FID, FPD and NPD Detectors), Analysis by LC-MS-MS, Analysis by HPLC - PDA, FLD Detectors, UV-Visible spectrophotometer

HERBAL ANALYSIS

We offer testing of Ayurvedic or Herbal Products . We have developed many robust and reliable analytical methods for a range of natural and herbal products and raw ingredients, with many of our tests analysing for a specific marker unique to the original source.

We aim to work with you to find a tailored approach supporting your particular product development needs.



IDENTIFICATION & PHYSICAL CHARACTERISTICS ANALYSIS

This involves macroscopic / organoleptic characteristics including colour, odour, taste, size, shape, texture, Loss on drying, reflective index, swelling index, Ash value, Extractive value, Saponification value, Acid value

PREPARATION OF CRUDE EXTRACT

We prepare crude extract by Simple extraction (maceration, percolation, infusion, digestion and decoction), fermentation, Distillation for oils, Microwave-assisted extraction, Ultrasound extraction, Soxhlation & Drying

EXTRACTION & ISOLATION

Our extraction and isolation technique includes; Solid Phase Micro Extraction, Liquid Phase Extraction, Supercritical Fluid Extraction, Isolation by Column Chromatography, Activity Guided / Bioassay Guided Fractionation, Isolation by HPLC, GC, TLC, HPTLC

IN-VITRO HERBAL DRUG SCREENING

Our in-vitro herbal screening are Antibacterial Screening, Anti-fungal Screening, Antioxidant Screening, MTT or Bio Assay For Drug Screening , Enzyme Inhibition Studies

PHYTO CHEMICAL ANALYSIS BY HPLC, GC, TLC, HPTLC, MASS SPECTROMETRY & SPECTROMETRY

IMPURITY AND INGREDIENTS ANALYSIS :

Our de-formulation reports can reveal a product's complete ingredients. Our testing services can identify potential impurities, determine CAS numbers, quantify the amounts of each raw ingredient within a product, and develop a formula cost analysis.

HERB AND DRUG INTERACTION STUDIES

FRAGRANCE PERFUME ANALYSIS

We are the premier provider of perfume , fragrance and flavour analytical services to the Cosmetics , Perfumery , Food , Herbal & Aromatic Oil Industries / Organisations .

We are comprehensively equipped to analyse samples for volatile or semi volatile in a variety of matrices.



PURITY ANALYSIS OF

ESSENTIAL OIL :

Analysis of fragranced products is of great importance for manufacturers, whose reputation may rely upon the qualities of their products consistently meeting customer expectations.

» **Purity Analysis by GC or GC-MS**

» **Fingerprint Analysis by GC-MS**

GC-MS is very suitable for fingerprint / trace analysis of perfume ingredients. It is a powerful analytical tool for trace and ultra-trace analysis, unknowns identification, and many other applications .

DE-FORMULATION OF FRAGRANCES :

Our deformation reports can reveal a product's complete ingredients. Our testing services can identify potential impurities, determine CAS numbers, quantify the amounts of each raw ingredient within a product, and develop a formula cost analysis.

TESTING OF ALLERGENS :

We have the various analytical tools to identify the allergen compounds in perfume formulation . The allergen screening test is performed using GC-MS together with relevant standards.

TESTING OF ALLERGENS :

Microbiology Lab, PCR, Real Time PCR, ELISA, Sequencing, Protein Chemistry Lab with Biorad FPLC, Ion Exchange Chromatography, Preparative HPLC, 2-D Electrophoresis, Blotting Apparatus, GC-MS-MS, Triple Quadrupole, Gas Chromatograph (FID, FPD and NPD Detectors), Analysis by LC-MS-MS, Analysis by HPLC - PDA, FLD Detectors, TLC, HPTLC, UV-Visible spectrophotometer, Ion Meters, RI Detector, Flash Point Apparatus, Culture Facility etc.

Our testing protocols include various national and international methods like BIS, ISO, and AOAC etc are used for testing these products.

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 / pharmacopoeial 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-analyzed 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.

By signing this agreement, both parties confirm that the terms contained herein are acceptable to them.

SAMPLE SUBMISSION FORM

CUSTOMER INFORMATION

Name :

Address :

Phone :

E.mail :

SAMPLE INFORMATION

#	Analysis Required	Sample Information	No. of Samples	MSDS
				Y/N

ANALYSIS INSTRUCTION

AUTHORIZATION SIGNATURE

DATE

For Office Use Only	Comment	
Received By		Date
Forwarded to		Date

MSDS QUESTIONNAIRE

Description of Sample(s):	
Material Composition/List of Ingredients?	
Is License required to handle sample?	
Is the sample a Biological Agent?	
Is Sample Radioactive?	
Physical Characteristics?	
Hazard/Transportation Labels?	
Does your Institution specify any specific Personal Protective Equipment (PPE) to your staff for handling sample(s)?	
Does your company specify any specific Sample Containment?	
Does your company specify any specific Sample Containment?	

OTHER INSTRUCTION



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