

More than 25 years of
Excellence



Bhagavathi Ana Labs Limited[™]

Environmental Engineers, Consultants,
Analytical Chemists & Technical Service Providers

Environment



Environment Studies

- Environmental Impact Assessment studies (EIA)
- Comprehensive Environment Impact assessment (CEIA)
- Environment Management Plan (EMP)
- Water Quality Modelling (WQM)
- Disaster Management Plan (DMP)
- Carrying Capacity Studies
- Regional Environmental Impact Assessment studies (REIA)
- Hydrogeological Studies
- Air Quality modeling
- Meteorological studies
- Environmental Liability studies
- Energy Audits
- Environmental Audit
- Risk Assessment Studies ((RA)
- Hazardous Operatability Procedures (HAZOP)
- Health & Safety Audit
- Water Pollution treatment & control (WPM)
- Hydro-geological Studies
- Solid Waste Management studies
- Hazardous Waste Management studies
- Socio-Economic studies
- Resettlement & Rehabilitation studies
- Ecological & Human Health Risk Assessment studies
- Studies on Bioremediation towards Sustainable Development
- Survey & Preparation of Mining plans
- Ground Vibration Studies for mines
- Gravimetric Dust Sampling for mines
- Occupational Health studies
- Wild-life studies

Environmental monitoring

Air Pollution

- Air Pollution Monitoring & Analysis
- Stack Emission Measurements
- Performance guarantee tests for Air Pollution Control
- Equipment viz., Cyclones, Dust Collectors & Wet Scrubbers

Water Quality

- Water Sampling & Analysis
- Water Flow Studies
- Water Quality Monitoring
- Water Quality Modelling (WQM)

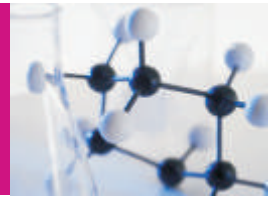
Waste Water

- Discharges & Effluent Characterization
- Performance study of Treatment Plants (ETP & STP)

Environmental Analysis

- Hazardous waste Characterization & Analysis
- Water & Waste Water Analysis
- Soil Testing
- Bio Diversity Studies
- Volatiles & Semi-Volatiles
- REACH Compliance
- RoHS Compliance
- Leachate studies

Analytical Testing



Chemical

Industrial & Fine chemicals as per IS or customer specifications. And for Impurity profiles Solvents, reagents, Intermediates

Water

- Surface / river / well ground water as per IS 10500
- Packaged Drinking Water as per IS 14543
- Natural Mineral Water as per IS 13428
- Water for Food Processing Industry as per IS 4251
- Water for Construction as per IS 456
- De-Mineralized Water
- Water for Swimming Pools
- Water for Cooling Tower (Boiler Feed / Condensate Water)

Water for International specifications like:

- WHO guidelines
- European Commission directives
- Norms set by EPA

Food and Agri products

- Composition and Impurity Profile
- Nutritional factors evaluation/ Nutritional labeling
- Trans Fat / Omega Fatty Acids
- Anti Oxidants / Polyphenols
- Additives / Preservatives in food
- Phthalate Esters
- Chemical Contaminants
 - o Metallic Elements (All metallic elements in sub ppm level)
 - o Residual Pesticides / Veterinary Medicines
 - o Environmental contaminants
- Mycotoxins
- Shelf Life Evaluations
- Packaging material / package integrity tests.
- Melamine detection
- Illegal dyes like Sudans
- Micobial Enumerations
- Swabs collection and analysis / Hygiene audits

Residues

I. Pesticide Residues / Agriculture residues:

We have about 500 pesticide residue standards for supporting National & International specifications.

Methods adopted:

- US FDA (Department of Food) – Pesticide Analytical Manual and Laboratory information Bulletins.
- European Commission Directives, regulations methods
- Methods published in the Journal of AOAC International
- Methods published in the Journal of AOCS
- Japanese Regulatory methods
- Methods published in other scientific journals
- Pharmacopiea methods
- In-house developed and validated methods

Products tested:

- All Agri Products – Cereals, Pulses, Vegetables, Fruits, Plant materials, Ayurvedic products, herbs, nuts etc.
- Raw materials / Food ingredients
- Ready to Eat / Canned foods / Jams / Jellies etc.
- Water / Soft Drinks
- Sugar and Confectionery products/ Honey
- Bakery products / Oil / Fats / Milk and its products
- Tea / Coffee / Spices
- Meat & Meat products / Poultry products
- Egg & Egg products / Sea food
- Food Additives / Preservatives
- Pet / Animal Feeds

II. Veterinary Drug Residue Testing:

We have about 100 Veterinary drug standards for supporting National & International Specifications

Tests performed:

- Nitrofurans and its metabolites
- Sulfonamides / Chloramphenicol / Tetracyclines
- Malachite Green & Leuco Malachite Green
- Stilbenes / Steroids / Resorcylic Acid Lactones
- Beta Agonists / Antibacterial substances
- Anthelmintics / Anticoccidials etc.

Products tested :

- Egg and poultry products / Meat and Meat products
- Marine and aqua products (Fish / prawns etc.)
- All animal products.



Drugs & Cosmetics

Products tested:

- APIs
- Formulations / Raw materials / Intermediates
- Injectables
- Patented and proprietary products
- Profilactics
- Cosmetics, Ayurvedic products Herbal products
- Plant materials etc.

Tests undertaken:

- General Identification tests, Dissolution studies
- Assays by titrimetric methods, Potentiometric, spectrometric methods and microbiological methods
- Sterility tests, Vitamin and Antibiotic assays
- Residual solvents & Organic volatile impurities
- Impurity profiles, Stability studies, Package integrity
- Residual pesticides
- Heavy metal and other metallic contamination
- Mycotoxins

Biological testing

We test all Food and agri products, water, Drugs and cosmetics for:

- Total Plate Count / Yeast and Mould Count
- E. Coli / Coliforms / Salmonella / Shigella
- Staphylococcus aureus
- Pseudomonas Aurigonas
- Listeria Monocytogenes
- Vibrio Cholerae
- Microbial limit tests
- Microbiological assays for Vitamins / Antibiotics
- Preservative Challenge tests
- Swabs collection and testing
- Hygiene impurities
- Indoor Air Quality monitoring

Ores & Minerals

We test all types ores / minerals / Rocks for:

- Gold by Fire assay
- Complete Mineral / Rock analysis for macro and trace analysis
- Estimation of Base / Rare-earth / Platinum group metals

Petroleum products / Fuels

We test all types Fuels / Petro products etc.

for: Tests done:

- Viscosity measurements
- Sp. Gravity, Relative density
- Distillation range
- Net and Gross calorific values
- Proximate and ultimate analysis
- Ware metal analysis
- Additives

Material testing

Typical industries which utilize our services are:

- Heavy Machinery, Engineering Products
- Metallurgical Industry, Consumer Products
- Electricals, Automotive, Aerospace
- Energy, Industrial Manufacturing
- Medical and Pharmaceuticals
- Textiles – Approval and Footwear
- Toys – Games, Cement and Building materials
- Bitumen and allied petroleum products
- Packaging Materials etc, Ceramic products

List of Tests Carried Out:

- Setting Time, Fineness, Soundness, Compressive Strength
- Tensile Strength, Brinell Hardness, Bend Test
- Re-Bend Test, Reverse Bend Test
- Lime Reactivity
- Proof / Yield Stress, Elongation, Breaking Load
- Sulphur Print Test, Macro Examination
- Camber, Impact test, Y Groove crackability test

Effluents / sludges

- Characterization & Analysis of Sludge/Soil/ waste water /hazardous waste
- Elemental analysis / Leachate studies
- VOCs, PAHs, PCBs, Dioxins etc.
- Residues of pesticides / drug compounds

* The Quality system of Bhagavathi is designed to comply with ISO/IEC -17025:2005, GLP standards.

* National and International standards like - EPA, FAO, EPA, BIS, ASTM, AOAC, CGMP, GCP, IP, BP, USP, EC etc., are adopted to deliver results with complete traceability and transparency.

Technical Training



Overview

BHAGAVATHI ANA LABS LIMITED's TRAINING DIVISION extends Technical training to personnel in the fields of Environment and Analytical testing to meet growing needs of the industry.

Hands-on training would be provided with latest techniques and state-of-the-art equipment.

Who should attend

The programmes are designed to improve technical proficiency

- Freshers from Colleges and Universities
- Working Professionals
- BHAGAVATHI offers tailored onsite training courses to the pharmaceutical, life science, medical device industries, Food Industries and Diary industries.

Expected outcome

- Enhancement of Analytical skills
- Training on real-time issues
- Efficient handling of equipment

On completion

- Certificates from Bhagavathi Ana Labs Ltd



Indoor Air Quality



Indoor Air Quality – Conventional Studies

- Industrial Workplace Monitoring
- Occupational Health & Safety Studies
- Personnel Monitoring
- Personnel Monitoring in Mines as per DGMS guidelines.
- Illumination Studies
- Outdoor Environmental Monitoring
- Emissions Monitoring
- Filter Testing
- Clean Room Monitoring
- Ventilation Studies
- Consultancy for improvement of Indoor Air Quality as per building structure and HVAC System

Monitoring of Indoor Air Quality as per ASHRAE / EPA Standards

- Temperature
- Relative Humidity
- Air movement
- Ventilation (CO₂)
- Particle concentration in cleaned HVAC system
- Air borne Particles
- Ultrafine Particles
- Carbon monoxide
- Formaldehyde
- Benzene (C₆H₆)
- Ozone (O₃)
- Hydrozen Sulphide (H₂S)
- Ammonia (NH₃)
- Nitrogen-Di-oxide
- Free Silica with FTIR
- Air borne contaminants such as Volatile Organic Compounds (VOCs)
- Particles particularly less than 4 microns (Respirable)
- Biologicals - Bacteria, and fungi count



Mining Services



Resource Appraisal

- Identifying virgin areas for mining through remote sensing
- Prospecting
- Exploration and drilling
- Core logging
- Sampling and chemical analysis
- Topographical surveys
- Mine surveys and annual/periodical updation of plans and sections
- Sampling and estimation of all mine produces, dumps etc.
- Sampling for grade control
- Mining plan and mining scheme
- Mine closure plans (progressive and final)
- Techno-economic studies
- Mine valuation

Management of Resources

- Scheme of prospecting
- Application for PL
- Exploration design and execution
- Exploration reports (periodical and final)
- Pre-feasibility and feasibility studies and analysis
- Application for ML
- Forest clearance from MoEF, New Delhi
- Environmental clearance from MoEF, New Delhi
- Wild life management plans
- Occupation health hazards mitigation plans
- Consent for establishment & operation
- Preparation of bankable documents
- Cost benefit analysis & Risk analysis

Conservation and Systematic Development

- 3D-Ore body modelling (grade wise and other mineability parameters)

- Mineralogical study and analysis
- Petrological study and analysis
- Ore microscopy study and analysis
- Mineral characterization studies and value addition cum
- Beneficiability studies
- Beneficiation studies (Lab- Scale)
- Beneficiation studies (Bench- Scale)
- Beneficiation studies (Pilot Plant- Scale)
- Mineral audit reviews

Safe Mining Operations

- Hydro-geological studies
- Vibration studies
- Tailing dam design
- Optimizing tailing dam capacity
- Waste dump/facility design
- Rock slope engineering
- Waste containment and control
- Waste water management
- Redeeming mineral bearing silts
- Stability assessments of existing tailing dams
- Roof and Wall stability investigation
- Roof support systems design Slope design
- Instrumentation and analysis
- Numerical modelling
- Geo-technical investigations
- Slope stability studies
- Roof, Wall and Floor grouting

Human Resource Development

- HRD in tune with changing technologies in India & other countries
- Data base management of mining professionals
- Need based placement of trained mining professionals
- Training of mining professionals

OUR SECTOR WISE REACH



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Our network offices

Overseas Branch	- Singapore
Andhra Pradesh	- Hyderabad, Visakhapatnam
Goa	- Ponda
Karnataka	- Hospet, Bangalore
Chattisgarh	- Raipur
Tamilnadu	- Chennai
Madhya Pradesh	- Bhopal, Maihar