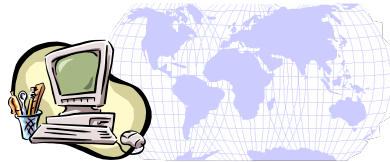


OUR MISSION

CENTRAL
INVESTIGATION
LABORATORY

The Central Investigation Laboratory is committed in providing high quality, cost effective and accurate product testing services in partnership with the food and agricultural industries and other regulatory bodies of Belize. The Staff at CIL is dedicated, professionally trained and has the commitment to undertake continuing education in order to provide optimal and competent laboratory testing services to safeguard agricultural and human health.



We are on the Web!
www.baha.bz/foodsafety/cil



Central Investigation Laboratory
St Joseph Street
PO Box 181
Belize City
Belize, Central America

Phone: 501-224-4794
Fax: 501-224-5230
Email: foodsafety@btl.net
Website: www.baha.bz



*Central Investigation
Laboratory*



Laboratory Services

Food and Environmental Testing



Central Investigation Laboratory (CIL)

- Full service, fully equipped food and environmental analytical testing capability
- Quality Assurance and Proficiency Testing Programs
- Highly trained professional and competent staff
- Custom service for your testing needs

Food and Environmental Testing

About CIL

CIL is a full Service food testing laboratory operated by the Belize

Agricultural Health Authority (BAHA), a legally established statutory Competent Authority for Animal Health, Plant Health, Food Safety and Quarantine Services in Belize.



Major Instrumentation

Liquid Chromatograph with Diode Array , UV/VIS , Fluorescence detectors and ALS Pickering™ Post Column reactor . Gas Chromatographs with micro ECD and FPD Detectors. Atomic Absorption Spectrophotometer with Flame. Charm™ II Analyzer (radio-immuno-chemistry). Micro Elisa Plate Reader, CO₂ Incubator, Solvent Extractor, Bomb Calorimeter, Protein Analyser, Fat Analyser, Autoclave and Laminar flow hoods.

Proficiency Testing and Quality Control

The Central Investigation Laboratory is registered with the **Inter- American network of Food Analysis Laboratories (INFAL)** in its quality control and proficiency testing program. Laboratory staff has been trained in **ISO 17025 Management Systems for the Laboratory** and **Quality Assurance for Microbiology Laboratories** through official courses offered by the **Association of Analytical Communities (AOAC)** in the USA and is participating in officially administered food microbiology proficiency testing programs administered by that organization. Unless otherwise notified, all analyses are performed as per AOAC, BAM, PAM, FDA , EPA or other such testing procedures as deemed applicable to clients needs.

Veterinary Diagnostic Laboratory (Central Farm)

CIL has linkages and provides laboratory support for BAHA's **Veterinary Diagnostic Laboratory (VDL)** in Central Farm, Cayo District. **VDL** provides diagnosis for domestic and foreign animal diseases ,diagnostic support for disease control and eradication programs, import and export testing of animals and companion animal testing services.



Herd Health and Disease Diagnosis Programs

Testing areas include: Haematology, Bacteriology, Serology , Parasitology, Pathology and Clinical Chemistry.



International Seafood HACCP Certification course at CIL

Food Safety Education and Training

Modern Conference facilities with all the amenities at CIL provides an ideal training venue for continuing education courses for BAHA staff and industry personnel. Training and continuing education courses is provided by the technical officers of BAHA as well as from educators and professionals from international organizations and institutions that are internationally acclaimed in their area of expertise. BAHA staff and industry personnel have already benefited from a number of these courses offered by BAHA.

International Alliances in Food Safety

BAHA is the primary institution in Belize responsible for the delivery of Program 5 (FOOD SAFETY) of the Government of Belize Food and Nutrition Security Policy. BAHA recognises that effective delivery of food safety services requires partnerships and with Industry, other regulatory and government agencies, and International organisations such as the Food and Agricultural Organisation (FAO), The Pan American Health Organisation (PAHO), as well as collaboration with such regional organisation as the International Institute for Cooperation in Agriculture (IICA) and the international Regional Organisation for Plant and Animal Health (OIRSA).





Shrimp Disease Diagnosis

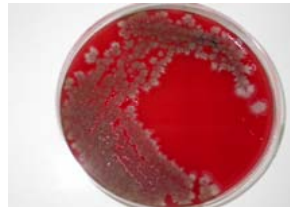
Aquatic Animal Health Laboratory

The Aquatic Animal Health Program at BAHA provides diagnostic support to Belize's valued Fishery industry. Samples are processed at CIL's "Wet" Lab for disease surveillance and diagnostic purposes. BAHA has also established links with the OIE (World Organisation for Animal Health) Reference Laboratory for Crustacean Diseases and Pathology at the University of Arizona, USA.

Mycology Laboratory

Analysis of specimens and identification to full fungal species or sub-species. Direct examination of materials, slide cultures, and physiological tests on diagnostic media.

Matrices: Juices, Grain, Feed, Processed Food, Honey.



Fungal Culture and identification



Sanitary Inspection at a Shrimp processing Plant

Food Safety Systems (HACCP) Inspections and Sanitary Audits

The Belize Agricultural Health Authority is the officially recognized Competent Authority in Belize for the assessment of Hazard Analysis and Critical Control points (HACCP) food safety systems as applied in the food processing industry. Food Safety Inspectors and technical officers of the Food Safety Department at CIL conducts sanitary inspections and audits to satisfy Belize and international regulatory requirements.



BAHA's Central Investigation Laboratory (CIL) Complex on St. Joseph Street
Belize City, Belize

General Information

Hours: Monday to Friday 8:00 AM to 5:00 PM
Closed on Public and Bank Holidays

Turnaround Time: Based on type of Analyses Requested
Standard Time for Microbiology Profiles : 7- 10 Days
Standard Time for Antibiotic and Pesticide Screening (Charm II): 3 Days
Standard Time for Chemical Residues (AAS, GC, HPLC) 3-5 Days
Standard Time for Water Quality Profile : 7 - 10 days

Reporting procedures: Original Results report will be mailed to Client. Reports can be faxed or e-mailed on client requests.

Sample Storage

Sample may be stored no longer than **60 Days** depending on their stability and amount of storage space required.

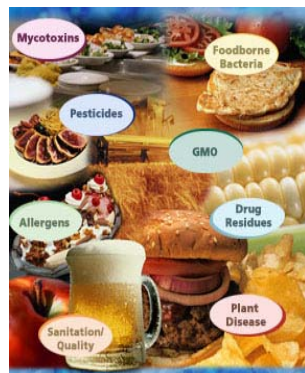
Sample Containers and Forms : available upon request and will be provided at no charge. Please call the laboratory for information.

Official Sample Collection: Sample collection can be provided by Food Safety Inspectors or other BAHA authorised personnel at standard inspection services fee charges. Please call laboratory to schedule.

Payment Terms: Net 30 Days

Mandate for Food Safety

The Central Investigation Laboratory provides the laboratory support to BAHA's food safety program by analyzing foods through chemical, microbiological and physical methods to verify the absence of pathogens and contaminants and to record conformance with standards of quality and safety thereby assuring a safe and wholesome food supply locally and internationally .



Laboratory Services provided at CIL



Microbiological testing

Food Microbiology Laboratory

Microbiological Profile, Decomposition Analysis, Sanitation checks, Total Plate Count ,Total Coliform Count, Fecal coliforms, Salmonella, E.coli, Staphylococcus sp., Specific pathogen isolations.

Matrices: Feeds, food and food products, water ,juices and beverages, meat and poultry, fish and fishery products , fruits and vegetables,

Chemical Residue Analytical Laboratory

Pesticides and Herbicides analyses (Organophosphates, Organochlorines (dieldrin, DDT etc., Carbamates), Heavy metals (Mercury, Lead, Copper, Arsenic, etc.), Veterinary drugs.

Matrices: Tissues (Beef, Pork, Poultry, Fish), Water, Milk, Dairy products , Juices , Fruits , Vegetables, Feed , Grain and Honey.



High Performance Liquid Chromatograph

Water Quality Laboratory

Microbial quality (Total plate counts, E coli, Fecal coliforms) , Physiochemical properties (Hardness, pH, Chlorine, Chlorides, Nitrates, Phosphates, Sulphates, Salinity Total dissolved solids, ,other) and Contaminants.

Matrices: Bottled Water, Waste Water, Wells, Vats, Coastal and Environmental Monitoring .



Atomic Absorption Spectrophotometer and ancillary water testing equipment



Compositional Analysis Laboratory

CIL uses its own modern analytical instrumentation and linkages with regional reference laboratories to provide rapid and accurate analytical solutions for the determination of the composition and quality of agricultural, food, pharmaceutical and chemical products.

Matrices: Processed food, Solvents and Solutions, nutritional analysis of novel food products, Veterinary drugs , Feed and Primary agricultural produce.

Gas Chromatographs

Residue Screening Laboratory

Pesticides screening (OP's, Carbamates), detection and identification of Veterinary drugs and Antibiotics in foods, Aflatoxins, Microbial quality and Hygiene tests , confirmation of Pastuerisation and Heat efficiency tests.

Matrices: Tissues (Beef, Pork, Poultry, Fish), Water, Milk, Dairy products Juices , Fruits , Vegetables, Feed, Grain and Honey.



CHARM ® II Analyzer