

FEE FOR SERVICE



AGRICULTURE



FOOD INGREDIENT DEVELOPMENT



BIOTECHNOLOGY



Fee For Service and Equipment

WHO IS GAAP

Established in 2021, the Global Agri-Food Advancement Partnership (GAAP) aims to support the growth of agricultural and food startups. Our facility boasts over 12,000 square feet of state-of-the-art laboratories, greenhouses, and office spaces.

Our mission is to drive innovation that enhances the global agriculture and food industry's competitiveness, sustainability, and efficiency. To achieve this, we offer a diverse range of expertise, equipment, and services to the most promising companies and innovative minds worldwide.

GAAP provides office, laboratory, and greenhouse spaces at competitive prices, along with a variety of equipment available either for a fee or as part of a package deal. Our goal is to foster an environment where emerging industries can thrive and where innovative solutions can rapidly take root and grow.

Our Facilities

One of our key focus areas is precision fermentation and synthetic biology. To support this, we have equipped our laboratories with state-of-the-art tools necessary for gene editing, synthetic biology, high-throughput screening, and bioreactors. Our bioreactors are versatile and can be used for a

wide range of applications, from the production of specific components, such as proteins, to the generation of biomass, like specialized yeast.

We also have downstream processing equipment available for the recovery and purification of the required components. Quality assessments can be performed in our well-equipped analytical laboratory.

In addition to the specialized equipment for precision fermentation and synthetic biology, we offer a comprehensive range of tools for general and other research purposes. This setup provides researchers with dedicated spaces to drive product development and streamline protocols effectively.

Some Key Research Fields

Fermentation

Up & Downstream processing

Analytics

Molecular biology

Microbiological

Plant growth

Plant Tissue culture

Development

3d Design

Functional prototyping

3d Custom manufacturing

Fee for Service

GAAP is offering fee for service work on our extensive list of lab equipment for work in the ag and food sector.

Different options available

Use of equipment at set fee

Analyses performed in house (Check out our inhouse experience)

Laboratory bench space (set period)

Packages can be worked out depending on requirements

Storage

Refrigerator storage

Freezer storage at -20°C & -80°C

The Process

- Read the list below and find the equipment that you want to utilize
- Contact our Lab and Facilities Manager, Martin Wilding martin@gaapvc.com
- Give a thorough explanation of the type of work you need, the equipment needed and a project timeline
- Response time : up to 2 weeks for Martin to look over your plan and equipment needs
- Once your project has been okayed, an upfront payment needs to be made before any work will start
- Proof of commercial liability insurance of no less than one million Canadian dollars (\$1,000,000 CAD) must be provided before any work can be done.
- Researcher must provide proof of training certificates in Laboratory Safety and WHMIS

In-House Expertise

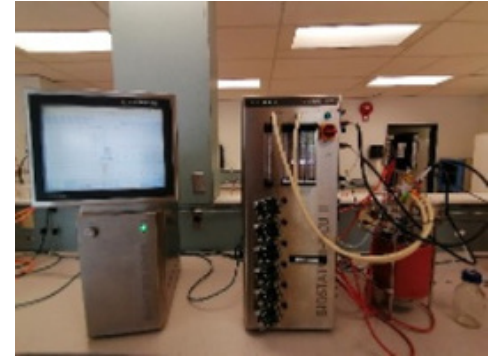
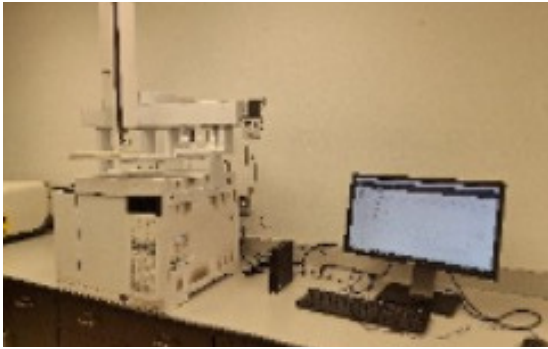
- Microbial isolation, characterization, growth and enzymes characterization.
- PCR analysis
- Microbial quality testing
- Solid state fermentation.
- Filamentous fungi production
- Determination of whole range enzyme activities e.g. lignin peroxidase, and endoxylanase.
- Biochar production & characterization
- Biotransformation of plastics in solid fermentation systems.
- Handling and interpretation of Atomic Force Microscopy (AFM)
- Handling of physical techniques such as static contact angle (SCA)
- Grant and paper writing.
- GMP and HACCP
- Yeast breeding
- Chemostat selection
- Lab scale fermentation
- Large scale production of microbes (2500 liters to 5000 liters)
- Plant growth optimization trails
- Tissue cultures and transformation

Focus on some Specialist Equipment

Some key features & uses

The Agilent 7890A Gas Chromatograph fits seamlessly into a research laboratory focused on fermentation, providing several key benefits that enhance analytical capabilities

- Excels in separating complex mixtures
- Accurate and precise quantitative analysis
- User-friendly software simplifies method setup and operation



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Some key features & uses

Ambr15 Advanced Microscale Bioreactor Workstation 24

- High-throughput, automated system
- Parallel cultivations of up to 24 microbioreactors
- Strain, media, and feed screening;
- Automates liquid handling, sampling, and reagent addition
- Cost-efficient with single-use bioreactors, saving labor, facility space, capital & media

Our Ambr15 system is located in our Discovery lab, a designated small separate area. It operates within its own laminar flow cabinet to maintain a clean process environment and prevent contamination

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Some key features & uses

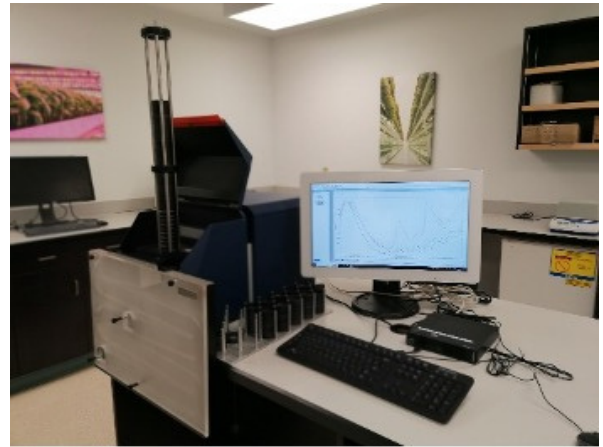
- Bio-Rad CFX Opus Real-time PCR system
- Supports gene expression analysis without ROX normalization.
- Assay optimization using thermal gradients and multiplexing.
- Integration with [BR.io](#) cloud platform for remote data analysis and access.
- Designed for both general and high-throughput qPCR applications.
- Enhances precision and efficiency in genetic analysis for fermentation research.



FOSS XDS Rapid Content Analyzer

- Provides non-destructive, rapid analysis of solid and liquid samples using near-infrared (NIR) technology.
- Enhances efficiency and accuracy in general analytical processes and fermentation-specific research.
- Invaluable for food and beverage testing, ensuring quality control and nutritional labeling

- Effective in poultry feed analysis, measuring protein and essential nutrient levels.
- Monitors and optimizes fermentation processes by analyzing chemical composition of fermentation broths.
- Supports real-time data analysis for informed decision-making to improve productivity and product quality.
- Versatile and powerful addition to research laboratories, suitable for both general and fermentation-specific applications.



- Tecan Freedom Evo-2 100 Liquid Handler
- High-throughput screening: Efficiently handles large numbers of samples for drug discovery and compound management.
- Biotechnology applications: Supports various biotech processes, including genomics and proteomics.
- Microplate handling: Automates pipetting and plate handling tasks for increased productivity.
- Process automation: Streamlines laboratory workflows by automating repetitive tasks.
- Liquid handling: Precisely dispenses and aspirates liquids for a range of applications.
- Quality control: Ensures consistency and accuracy in sample preparation and analysis.

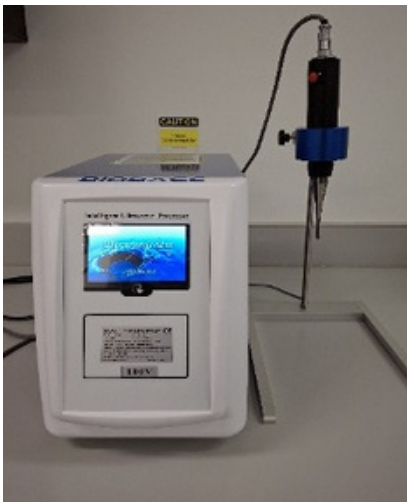
Focus on some Specialist Equipment

- Sterilization of Laboratory Equipment:
- Microbiological Applications: Essential for preparing culture media and disposing of biohazardous waste.
- Double beam Spectrophotometer
- Quantifying Concentrations: Determining the concentration of a substance in a solution by measuring its absorbance at specific wavelengths.
- Analyzing Chemical Reactions: Monitoring the progress of chemical reactions by observing changes in absorbance over time.
- Quality Control: Ensuring the consistency and quality of products in industries such as pharmaceuticals, food, and beverages.
- Environmental Testing: Detecting and quantifying pollutants in air, water, and soil samples.
- Research and Development: Supporting scientific research in fields like biochemistry, molecular biology, and materials science.
- Forced air Drying oven
- Drying and Dehydrating: Efficiently removes moisture from materials, ensuring uniform drying.
- Sterilization: Kills bacteria, viruses, and other microorganisms by providing consistent heat.
- Agricultural Processing: Drying and processing crops to preserve them.
- Freeze dryer Pilot Scale
- Food Preservation: Extending the shelf life of fruits, vegetables, meats, and even coffee by removing moisture while maintaining nutritional value and taste.
- Research and Development: Supporting scientific studies by preserving biological samples, such as cell cultures, tissues, and enzymes.
- Cryopreservation: Storing biological materials at low temperatures without the need for liquid nitrogen.
- Muffle furnace 1000°C
- Ashing Samples: Removing organic material from samples to analyze inorganic content.
- Heat Treating: Hardening, tempering, and annealing metals and alloys.
- Gravimetric Analysis: Measuring the weight of a substance before and after a process to determine its composition.
- Sintering: Fusing powder particles together to form a solid mass.
- Ignition Testing: Conducting tests to determine the ignition properties of materials.
- Rotary Evaporator 10 & 20 Liter
- Solvent Removal: Efficiently evaporates solvents from samples, part of purification processes.
- Concentration: Concentrates solutions by removing excess solvents,.
- Purification: Purifies compounds by separating them from impurities through selective evaporation.
- Sample Preparation: Prepares samples for further analysis by removing solvents, often used in analytical chemistry and biochemistry.
- Re-crystallization: Evaporating solvents leaving behind purified crystals.



Shaking Incubator

- Cell Culture: Promotes cell growth by providing aeration and even distribution of nutrients.
- Fermentation: Supports microbial fermentation processes by maintaining optimal growth conditions.
- Hybridization: Facilitates the hybridization of nucleic acids under controlled temperature and shaking conditions.
- Biochemistry: Used in various biochemical assays and experiments requiring precise temperature control and agitation.
- Enzyme and Cell Tissue Research: Ideal for studying enzyme activities and cell tissue cultures.
- Solubility Studies: Assists in studying the solubility of compounds under different conditions.
- Ultrasonic Cell Disruptor/Sonicator
- Here are some key uses:
- Cell Lysis: Breaking open cells to release intracellular components like proteins, DNA, RNA, and organelles.
- Homogenization: Creating uniform mixtures of samples by breaking down cell walls and tissue structures.
- Extraction: Extracting valuable compounds from cells or tissues, such as enzymes, nucleic acids, and metabolites.



- Emulsification: Mixing immiscible liquids to form stable emulsions, useful in food science and pharmaceuticals.
- Degassing: Removing dissolved gases from liquids to prevent oxidation and improve sample quality.
- Cleaning: Removing contaminants from surfaces and equipment by using ultrasonic waves to dislodge particles.
- Vacuum drying oven
- Drying Heat-Sensitive Materials: Ideal for drying materials that might degrade at higher temperatures,
- Removing Solvents: Efficiently removes solvents from samples without the risk of oxidation or contamination.
- Food Industry: Removing moisture from food products to extend shelf life and prevent spoilage.
- Electronics Manufacturing: Drying electronic components to prevent corrosion and ensure proper functionality.
- Research and Development: Supporting various scientific experiments that require precise drying conditions.



Analytical Equipment

<i>Description</i>	<i>Model</i>	<i>Brand</i>	<i>Grouping</i>
<i>Automatic Gel Imaging Analysis System</i>	BK-AG100	Biobase	Analytical
<i>Balance Mettler Toledo XS603S</i>	XS603S	Mettler	Analytical
<i>Block Heater Isotemp Digital Dry Bath</i>	88860022013	Fisher	Analytical
<i>Centrifuge Mini</i>	Mini-10K+	Biobase	Analytical
<i>Centrifuge 5430</i>	5430	Eppendorf	Analytical
<i>Centrifuge Low speed</i>	LC-H4KII	Biobase	Analytical
<i>Centrifuge Sorvall ST16</i>	ST16	Thermo Scientific	Analytical
<i>Electric balance</i>	BP1003B	Biobase	Analytical
<i>Electric balance</i>	BP2003B	Biobase	Analytical
<i>Electric balance Max 15000g</i>	BP12002	Biobase	Analytical
<i>Electrophoresis Power Supply</i>	BEP-600D	Biobase	Analytical
<i>Electrophoresis Tank Horizontal</i>	BK-HET01	Biobase	Analytical
<i>Elisa Microplate Reader</i>	BK-EL10B	Biobase	Analytical
<i>Fluorescence Microscope & Illuminator</i>	XY-2	Biobase	Analytical
<i>Freedom Evo-2 100</i>	Evo-2 100	Tecan	Analytical
<i>GC 7890A with PAL system</i>	7890A	Agilent	Analytical
<i>Hotplate Magnetic Stirrer</i>	MS7-H550-PRO	Biobase	Analytical
<i>Hotplate Scientific Isotemp</i>	11-100-100H	Fisher	Analytical
<i>Ice maker</i>	FIM85	Biobase	Analytical
<i>Magnetic Stirrer</i>	MS-S	Biobase	Analytical
<i>Magnetic Stirrer Hot Plate</i>	MS7-H550-Pro	Biobase	Analytical
<i>Micro Plate Mixer</i>	MX-M	Biobase	Analytical
<i>Microplate Heat Sealer</i>	ALPS 50V	Thermo Scientific	Analytical
<i>Microplate shaker</i>	BK-MS300	Biobase	Analytical
<i>Microplate Shaker Incubating</i>	2217759	Fisher	Analytical
<i>Mixer - 231 Touch</i>	12-811R	Fisher	Analytical
<i>Muffle Furnace</i>	MX16-10TP	Biobase	Analytical
<i>pH meter Scientific Accumet AB250 pH kit</i>	AB250	Fisher	Analytical
<i>pH Meter handheld</i>	PH-10S	Biobase	Analytical
<i>qPCR Opus</i>	Opus	Biorad	Analytical
<i>Rotary Evaporator Small 1liter</i>	BK-RE-1A	Biobase	Analytical
<i>Rotating Mixer</i>	MD-RD-Pro	Biobase	Analytical
<i>Rotating Mixer Vertical</i>	MX-RL-E	Biobase	Analytical
<i>Sartorius Entris II Essential Line Analytical Balance</i>	Entris II	Sartorius	Analytical
<i>Shaker Reciprocating</i>	TSSL2	Techne	Analytical
<i>Shaking Water Bath Incubator</i>	SWB-A	Biobase	Analytical
<i>Spectrophotometer Double Beam</i>	BK-D580	Biobase	Analytical
<i>Tabletop Small Capacity Shaker</i>	SK-L330 pro	Biobase	Analytical
<i>Vortex Mixer</i>	MX-S	Biobase	Analytical
<i>Water Bath Isotemp 205 Digital</i>	15-462-5	Fisher	Analytical
<i>Xds Rapid Content Analyzer Monochromator Type XM-1000</i>	60055167	Foss	Analytical

Fermentation Equipment

<i>Aircompressor 1450W 24L</i>	<i>1450W 24L</i>	<i>Vevor</i>	<i>Fermentation</i>
<i>Aircompressor 750-25L 750W/1HP</i>	<i>750W/1HP</i>	<i>Vevor</i>	<i>Fermentation</i>
<i>Ambr Advanced Microscale Bioreactor Workstation 24</i>	<i>AMBR 24</i>	<i>Sartorius/TAP</i>	<i>Fermentation</i>
<i>Bioreactors 5liter & Controllers Bailun</i>	<i>BLBIO-5GJ</i>	<i>Bailun Bio</i>	<i>Fermentation</i>
<i>Bioreactors 5liter X6 Supply Units X6 & BioPAT DCU Tower</i>	<i>Tower</i>	<i>Sartorius</i>	<i>Fermentation</i>
<i>Circulating Water Vacuum pump</i>	<i>SHZ-DIII</i>	<i>Vevor</i>	<i>Fermentation</i>
<i>Peristaltic pump Masterflex L/S Economy drive</i>	<i>L/S</i>	<i>Masterflex</i>	<i>Fermentation</i>
<i>Water bath Refrigerated Circulating</i>	<i>6L</i>	<i>Vevor</i>	<i>Fermentation</i>

Microbiological Equipment

<i>Autoclave Large Capacity Vertical</i>	<i>BKQ-B120I</i>	<i>Biobase</i>	<i>Microbiology</i>
<i>Autoclave Tabletop</i>	<i>BKMZB</i>	<i>Biobase</i>	<i>Microbiology</i>
<i>Autoclave Tabletop</i>	<i>BKMZA</i>	<i>Biobase</i>	<i>Microbiology</i>
<i>Bacterial Colony Counter</i>	<i>BC-50</i>	<i>Biobase</i>	<i>Microbiology</i>
<i>Biosafety Cabinet</i>	<i>BSC-4FA-NA</i>	<i>Biobase</i>	<i>Microbiology</i>
<i>Freezer Household</i>	<i>3752FS</i>	<i>Fisher</i>	<i>Microbiology</i>
<i>Incubator Microbial</i>	<i>BJPX-B150</i>	<i>Biobase</i>	<i>Microbiology</i>
<i>Laminar Flow Cabinet</i>	<i>BBS-H1300</i>	<i>Biobase</i>	<i>Microbiology</i>
<i>Laminar Flow hood</i>	<i>Whisper</i>	<i>Terra</i>	<i>Microbiology</i>
<i>Shaking Incubator - Lab Flask Benchtop Shaker</i>	<i>SK-300D</i>	<i>Biobase</i>	<i>Microbiology</i>
<i>Shaking Incubator Vertical Type</i>	<i>BJPX-1102D</i>	<i>Biobase</i>	<i>Microbiology</i>

Processing Equipment

<i>Forced Air Drying Oven</i>	<i>BOV-T105F</i>	<i>Biobase</i>	<i>Processing</i>
<i>Freeze Dryer</i>	<i>BK-FD20S</i>	<i>Biobase</i>	<i>Processing</i>
<i>Homogenizer & stands</i>	<i>D-160</i>	<i>Biobase</i>	<i>Processing</i>
<i>Rotary Evaporator</i>	<i>EXRE-2002</i>	<i>Biobase</i>	<i>Processing</i>
<i>Rotary Evaporator</i>	<i>EXRE-1002</i>	<i>Biobase</i>	<i>Processing</i>
<i>Stirrer & stands LCD Digital Enhanced Overhead</i>	<i>OS40-Pro</i>	<i>Biobase</i>	<i>Processing</i>
<i>Ultrasonic Cell Disrupter Portable</i>	<i>UCD-PO1</i>	<i>Biobase</i>	<i>Processing</i>
<i>Vacuum Drying Oven</i>	<i>BOV-90V</i>	<i>Biobase</i>	<i>Processing</i>
<i>Vacuum pump</i>	<i>V-500</i>	<i>Buchi</i>	<i>Processing</i>

Storage

<i>Freezer Eventemp Frigidaire</i>	<i>FFUE2022AW</i>	<i>Frigidaire</i>	<i>Storage -20°C</i>
<i>Refrigerator Eventemp Frigidaire</i>	<i>FRAE2024AW</i>	<i>Frigidaire</i>	<i>Storage -4°C</i>
<i>Minus 86 Freezers</i>	<i>BDF-86V08</i>	<i>Biobase</i>	<i>Storage -80°C</i>