

FERMENTATION PLANT

The Fermentation Plant houses 20 fermenters ranging from 20L to 15,000L, along with associated downstream processing equipment. The facility is used to develop, optimize and scale biological processes, provide toll processing services and assist customers in the deployment, demonstration and commercialization of novel technology.

The Fermentation facility has been in operation for over 30 years and has worked with a broad range of organisms and processes. The facility has proven to be a critical resource for companies demonstrating new processes at scale, and provides the expertise and experience often needed for new processes under development.

BIOLOGICAL PROCESS DEVELOPMENT

As a product moves from the lab to the market, Bio-Industrial Services can assist with developing a commercially viable process for microbial based products. Services include:

- Process Development
- Optimization
- Scale-up
- Production
- Downstream processing
- Quality assurance program including batch records and documentation that facilitate process transfer

Improve your yield. Reduce your cost per unit. Get to the market faster. Demonstrate your process at scale.

Experienced people, well-equipped research labs, large scale facilities and various complimentary services.



Take advantage of the Fermentation Team experience and proven track record

The Fermentation Team is consistently able to complete clean runs of complex, high quality microbial products

- Shake flask to 15,000L
- Well-equipped research, process development, scale-up, and analytical facilities
- Flexible contract and collaborative R&D services
- Complete project confidentiality
- Experienced in Intellectual Asset Management and Technology Commercialization
- Multi-disciplinary teams and access to the extensive resources and expertise residing within InnoTech Alberta

Technology transfer

Bio-Industrial Services can provide clients with manufacturing and technology transfer guidance to other manufacturing facilities through our network of contacts and alliances.

“After searching alternative providers that could accomplish both process optimization and our required scale-up activities, we found the facilities at InnoTech Alberta fully adequate for our needs, as well as the management and operating personnel in the Fermentation department to be highly competent and accommodating to our needs. Ultimately the process developed at InnoTech Alberta was transferred to a commercial scale fermentation facility and successfully operated at the 80KL scale for several years until the technology was sold to a larger, multi-product entity.”

Patrick Simms, Principal
Industrial BioProcessing, LLC

EXTENSIVE EXPERIENCE

We are experienced with more than 50 different species of microorganisms as well as various production methods and can develop processes for most organisms and expression systems, both wild and recombinant, including:

- Bacteria - E-Coli, Streptomyces
- Yeast - Pichia, Saccharomyces
- Heterotrophic Algae
- Fungi
- High cell density and fed batch fermentations

InnoTech Alberta, a subsidiary of Alberta Innovates, is a leading research and technology organization serving the needs of industry, entrepreneurs and the public sector. Our leading-edge expertise and industrial-scale research and demonstration facilities accelerate and de-risk technology development and deployment for our clients with a focus on industrial solutions and commercial application.

Visit us at: InnoTechAlberta.ca

EQUIPMENT FOR DEVELOPMENT & SCALE UP OF PRODUCTION PROCESS

*Fermenters from 20L to 15,000L,
with capability for:*

- Oxygen enrichment (some fermenters)
- Real-time data acquisition of standard parameters including off-gasses by mass spectrometry

Centrifuges

- Tubular bowl (7.5 kg bowl capacity)
- Disc stack (up to 10,000L/hr flow operating volume)

Cell Disruption Equipment

- Dymomill (5L volume)
- High Pressure Homogenizer Filtration Equipment
- Microfiltration modules
- Ultrafiltration modules

Drying Equipment

- Lyophilizers
- Spray Dryer
- Vacuum Evaporation/Distillation

Solvent Extraction

- Liquid-Liquid Exchange options
- Solvent amenable (Zone 2) segregated work space

PUT OUR EXPERTISE TO WORK FOR YOU

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Bio Industrial Services