

# LICENSING OPPORTUNITY



InnoTech Alberta has a variety of technologies available for licensing, and we work with large and small companies to set up mutually beneficial licensing deals. With more than 90 years in applied research and development, we are an experienced commercialization partner. InnoTech's licensing opportunities are the result of our world-renowned research programs.

Contact us at [licensing@albertainnovates.ca](mailto:licensing@albertainnovates.ca) to explore these opportunities.

## *Elemental Analyzer* TECHNOLOGY OVERVIEW

The Elemental Analyzer is an online tool for simultaneous multi-element analysis of dissolved substances in aqueous solutions.

Traditionally, elemental analysis has been performed in a lab. This requires samples to be sent off-site and can result in industrial process delays. The Elemental Analyzer is based on Solution Cathode Glow Discharge (SCGD, pictured above) methodologies, which we have improved to achieve stable plasmas at low flow rates. This enables online analysis, with real-time process monitoring and control.

The Elemental Analyzer was initially developed to measure aqueous ions in steam-assisted gravity drainage water responsible for scale and fouling, but there are many other industrial and environmental applications that can be explored.

[innotechalberta.ca](http://innotechalberta.ca)

## ADVANTAGES

- ✓ **Online, real-time operation**  
Stable operation allows for online analysis and eliminates the need to take samples for off-site analysis.
- ✓ **High sensitivity**  
The detection limits of the Elemental Analyzer are lower than the best published SCGD techniques.
- ✓ **Comprehensive analysis**  
The Elemental Analyzer is also useful for:
  - Detection of molecular species e.g. silica
  - Isotopic differentiation e.g. water (H<sub>2</sub>O) vs. heavy water (D<sub>2</sub>O)
  - Measurement of colloidal counterions and estimation of clay content
- ✓ **Cost-effective**  
Use of the Elemental Analyzer can help optimize industrial processes e.g. to reduce scaling and fouling in industrial water treatment systems.

# Elemental Analyzer

## COMMERCIAL APPLICATIONS

### Multi-element analysis for:

- Steam-assisted gravity drainage operations
- Surface mining of bitumen to improve extraction efficiency
- Effluent discharge monitoring (e.g. tailings discharge)
- Environmental monitoring of lakes and rivers
- Industrial process control (mining, agriculture, semiconductor manufacturing)

## STATUS

Issued and pending patent applications in various jurisdictions, including issued US patent 9,989,472.

***This technology is available for licensing.***

### Want to explore this opportunity?

Email [licensing@albertainnovates.ca](mailto:licensing@albertainnovates.ca).

Our province is blessed with abundant natural resources, world-class infrastructure and research institutions, a highly skilled workforce, and a dynamic, entrepreneurial business community. Alberta Innovates harnesses these strengths by acting as the catalyst between government, industry and academia, to solve some of the biggest challenges facing our province.

## TECHNICAL SERVICES

Helping organizations develop their technologies faster and smarter through our subsidiary, InnoTech Alberta.

- » 100,000 m<sup>2</sup> of product/process development and scale-up facilities in the areas of petroleum, environment and carbon management, bio and industrial technologies
- » 300 hectare research farm, three greenhouses, and 36 growth chambers

## FUNDING PROGRAMS

- » Fostering an entrepreneurial culture and increasing Alberta's critical mass of innovation talent
- » Post-secondary investment programs offer a broad range of support to researchers at all stages of their careers, from graduate students to the world's top researchers
- » Industry investment programs offer support to Alberta-based SMEs in a variety of ways to help accelerate their growth and success

## REGIONALLY ACCESSIBLE COMMERCIALIZATION SUPPORT

- » Making connections and pointing businesses and entrepreneurs in the right direction
- » Alberta Regional Innovation Network System – an integrated province-wide system ensuring SMEs and innovators have access to vital services and resources to help them succeed

## LICENSING SERVICES

- » Managing the translation of Alberta Innovates intellectual property into business solutions
- » Facilitating licensing deals with industry anywhere in the world

 **ALBERTA INNOVATES**  
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