



Biodiesel Production Research Demonstration

Olds College School of Innovation

Olds College has been involved in research activities since its founding in 1913. During 1999, an exciting new research initiative was established at the College. Today, the Olds College School of Innovation (OCSI) is a state of the art applied research facility with a vision to be the premier applied research community in Canada.

OCSI works directly with small and medium-scale businesses. In so doing, it provides direct access to scientific expertise, College assets, and research land. All science services are “solution oriented” and provide commercial value to customers and College partners.



Since its establishment in 1999, OCSI has linked customers, businesses, and organizations to applied research experts and a vast array of College and laboratory assets. During this period, it has also linked students to applied research methodology, experts, and projects. All of these activities have enhanced the educational and applied research experience at Olds College and have improved the competitiveness of small and medium-scale enterprises. The major activities of OCSI include:

- **contract applied research,**
- **collaboration with academic and research institutions in Canada and internationally,**
- **innovative product and process development, and**
- **training of highly qualified personnel.**

OCSI Biodiesel Services

We,

- **assess the effectiveness of magnesol filtration as a dry wash biodiesel process,**
- **analyze end-use alternatives and waste streams (including raw unrefined oilseed cake and glycerin),**
- **host biodiesel production and demonstration tours,**
- **test fuel performance and impacts of biodiesel use (pilot trials and dynamometer tests), and**
- **perform financial and feasibility analyses.**



OCSI Biodiesel Project and Findings

OCSI is expanding its biodiesel services and has established a biodiesel refinery at Olds College. This facility will produce sufficient biodiesel to meet the demand of research partners and serve as a demonstration facility for new technology, processes, and training. This new initiative has received interest and financial support from numerous government, community and industry partners. In addition, local farmers and producers are supporting the project and will have an opportunity to utilize both biodiesel on a trial basis and canola cake for use in livestock feeding. The biodiesel refinery uses compact and modular equipment, including a 5 tonne seed press, oil filters, oil preheater, 400 litre stainless steel batch reactor, 400 litre stainless settling tank, 2,000 litre poly biodiesel storage tank, and magnesol filtration. To ensure quality storage of biodiesel, a 10,500 litre split-tank storage and blending system is also used to maintain environmental safety considerations, optimize stored fuel quality, and distribute consistent blends of biodiesel and petro-diesel to end-users on a year-round basis.

Senior Staff

Dr. Abimbola Abiola, Scientific Leader

Ms. Tanya McDonald, Bioenergy Research Associate

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OCSI Advantages

- **Confidential services**
- **Exceptional expertise**
- **Modern facilities**
- **On-site training**
- **Quick turnaround**
- **Competitive prices**
- **Over 800 ha. of land available for research and commercial production.**

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The Olds College School of Innovation (OCSI) is a state of the art applied research facility within Olds College.

The core objective of OCSI is to advance research, commercialization, and innovation for agri-business. Areas of research include **Bioenergy and Waste Management** and **New Products from Crops and Bio-processing**.

Find out more at www.oldscollege.ca/schools/ocsi/index.htm

