

QUICK LINKS:

- Home -

GO

- @St. Norbert August
- Overseas football game will draw 400 Green Knight fans to Dublin
- Recycling truck runs on student-made biodiesel
- Visiting artist to open 2012-13 gallery season
- Issue archive
- How to subscribe



Arielle Tremel '14 (left) and
Amanda Crupi '12

August 2012

Recycling truck runs on student-made biodiesel

The biodiesel that partially fuels the college's recycling truck is now produced on campus, thanks to a research partnership between **Amanda Crupi '12**, **Arielle Tremel '14** and **Larry Scheich** (Chemistry).

Used oil from fryers in Phil's and Michels Commons is collected and converted into the fuel in a 40-gallon NWR Liberty Biodiesel processor located in the basement of John Minahan Science Hall. The team estimates their project will save the college \$18,000 annually.

A cleaner alternative

The biodiesel is created through base-catalyzed trans-esterification of vegetable oil, which is first filtered, heated and mixed with methoxide before being left to settle for 24 hours. Three batches of 40 gallons each are produced every two weeks and serve as fuel for the college's recycling truck.

Crupi and Tremel conducted tabletop test runs before issuing their product. Crupi says, "A lot of testing went into it ahead of time to make sure that it was of a good quality, similar to that of the diesel that was already being used."

Crupi explains that biodiesel is such a clean fuel that it will clear the residue that accumulates in the rubber lines of an older vehicle over years of use. As that material loosens, it can create clogs further down the lines. Initially, then, the team recommended fueling the truck with a mixture containing 5 percent biodiesel. They have since upped the proportion to about 20 percent.

A significant savings

Taking costs into account, the team figures the college saves \$118 per 40-gallon batch of biodiesel used, for a projected annual savings to the college of \$18,000.

Crupi and Tremel say their production process is nearly 100 percent green. The only byproduct, glycerin, can be made into soap by adding potassium hydroxide. In fact, the women are ready to provide campus bathrooms with the liquid soap – but acknowledge that this product may prove a harder sell.

Aug. 7, 2012

Office of Communications

Phone: (920) 403-3557

Fax: (920) 403-4010

E-mail:

communications@snc.edu

