



FOR IMMEDIATE RELEASE

Virent Makes Gasoline from Cellulosic Biomass

**Biofuels Pioneer Converts Corn Stover and Loblolly Pine
Into BioFormate™ Gasoline with Molecular Composition
Similar to Gasoline Derived from Fossil Fuels**

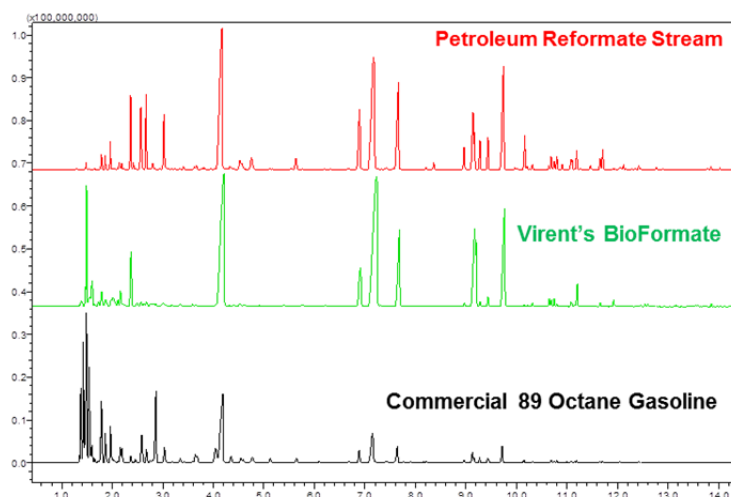
Madison, Wisconsin June 2, 2011 – Virent announced it has successfully produced biogasoline from corn stover and pine harvest forest residuals, as a recipient of the U.S. Department of Energy's (DOE) February 2010 grant to the [National Advanced Biofuels Consortium](#) (NABC). Virent's significant milestone supports the NABC's goal to develop technologies to convert cellulosic biomass feedstocks into hydrocarbon fuels that are sustainable, cost-effective and compatible with existing infrastructure.

Virent's *Catalysis of Lignocellulosic Sugars* (CLS) is one of six different process strategies represented in the DOE's grant program with the NABC. The CLS strategy work to date was completed in collaboration with Catchlight Energy (pine material supplier), Iowa State University (corn stover supplier), with Washington State University performing oxidation and enzymatic hydrolysis treatments necessary to digest cellulose for these two samples. The National Renewable Energy Laboratory (NREL) supplied two additional hydrolysate samples which underwent a dilute sulfuric acid pretreatment and enzymatic hydrolysis process for its breakdown of the cellulose. Virent then processed the four hydrolysate samples using its patented BioForming™ process.

Virent fed each of the four hydrolysate samples into its Aqueous Phase Reforming (APR) catalyst reactor system, removing most of the oxygen from the biomass sugar mixtures, producing monooxygenates such as alcohols, aldehydes and ketones, plus the reforming products of hydrogen and carbon dioxide. Unlike other pathways, Virent's APR process is well suited to handle mixed sugars from cellulosic streams with minimal processing. The liquids were then fed into Virent's Catalytic Oxygenates to Aromatics (COTA) process to produce a high octane biogasoline, which the company has trademarked BioFormate™.

“Producing gasoline from cellulose is an important milestone for our company, and for the biofuels industry overall,” said Dr. Randy Cortright, Virent’s founder and chief technology officer. “We anticipate further development in our production of drop-in fuels and chemicals from biomass, giving our nation long-awaited access to a wider range of feedstock choices.”

Gas chromatography analysis, seen in the figure below with each sample stacked for clarity, shows the striking similarity between Virent’s BioFormate™ gasoline and a typical petroleum reformat used at a refinery. Because of this similarity, Virent’s biogasoline is truly “drop-in,” meaning it can be blended at high concentrations just as high-octane petroleum reformat is used in blending commercial gasolines today. More detailed technical information about Virent’s work with the NABC can be found at the [NABC website](#).



About Virent

Virent is in the business of replacing crude oil by applying clever chemistry to create the chemicals and fuels the world demands using a wide range of naturally-occurring, renewable resources. Our patented technology features catalytic chemistry to convert plant-based sugars into a full range of products identical to those made from petroleum, including gasoline, diesel, jet fuel, and chemicals for plastics and fibers. Our products are “drop-in” replacements that enable full utilization of existing logistics infrastructure without blending limitations.

The development of Virent’s BioForming® technology platform is supported through strategic investors including Cargill, Shell and Honda, as well as 100 employees based in Madison, Wisconsin. The company has received several grants from the U.S. Departments of Commerce,

Energy and Agriculture and has been recognized with many honors, including the World Economic Forum Technology Pioneer award and the EPA's Presidential Green Chemistry Challenge Award. Virent's biogasoline is also being used by the Scuderia Ferrari Formula 1 racing team.

Please learn more about us at Virent.com.

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