

# Media Release

## Clariant launches biofuel of the future

- **Germany's largest cellulose ethanol plant inaugurated in Straubing**
- **CEO Hariolf Kottmann: A milestone in the strategy for sustainable products and processes**
- **Federal Minister of Research Annette Schavan: National Research Strategy BioEconomy 2030**
- **Biofuel of the future cuts CO2 emissions by 95% without competing with food production**

Muttenz, 20 July 2012 - Clariant, the Swiss specialty chemicals company, today inaugurated Germany's biggest pilot plant for the production of climate-friendly cellulose ethanol from agricultural waste. Located in Straubing, Bavaria and supported by the Bavarian government and the Federal Ministry for Education and Research, the futuristic project will produce up to 1,000 tonnes of cellulose ethanol from around 4,500 tonnes of wheat straw based on the sunliquid® technology developed by Clariant. It represents an investment of around 28 million euros. Studies show that Germany potentially has around 22 million tonnes of straw that could be used for energy production without compromising essential soil regeneration. This would be sufficient to cover around 25% of Germany's current gasoline requirements.

In the presence of Federal Minister Annette Schavan and the Bavarian Minister of Economic Affairs, Martin Zeil, Clariant CEO Hariolf Kottmann declared: "The inauguration of the new plant marks an important milestone in the production of a climate-friendly biofuel that can also be used as a raw material for the chemical industry." Kottmann appealed to politicians and industrialists to draw lessons from the failed start-up of biofuel E10 and to seek open dialogue with all interested parties. "Only when society recognizes the environmental benefits of climate-friendly biofuels can second-generation bioethanol be successful." Kottmann called for stable and reliable framework conditions and an extension of the tax exemption status for second-generation biofuels beyond 2015.

Federal Minister Annette Schavan said "This plant clearly demonstrates that products traditionally based on petroleum can be manufactured to the same standard using biomass. Thus this new plant serves as an important contribution to a sustainable Bio-Economy".

As far as Bavarian economics minister, Martin Zeil, is concerned, there is no better place for the pilot plant than Straubing. "Here at Bavaria's competence center for

renewable raw materials, we don't just have the raw material straw but above all also the necessary scientific backup in the form of both university and non-university research facilities. If we can make the breakthrough here using the sunliquid technology, it will create a raft of new options in terms of jobs and earnings potential in what is essentially a rural area. And from a global perspective, there's no 'food or fuel' issue when plant waste is recycled."

The plant at the Bavarian BioCampus in Straubing is logistically well-located right next to the Donau harbour, and will procure its raw materials largely from the Straubing region. The Mayor of Straubing, Markus Pannermayr, welcomed Clariant's involvement in the area, describing it as the "most innovative major 'green chemistry' company at the Bavarian BioCampus." He also underlined his willingness to work with district administrator Alfred Reisinger toward the sustainable provision of biomass for industrial utilization in the context of the "Green Chemistry Belt" strategy for the Danube region.

Professor Andre Koltermann, Head of Clariant's Biotech & Renewables Center, added: "We have been developing the sunliquid technology since 2006 and have been testing the method on a pilot scale since 2009." In an area encompassing approximately 2,500 square meters, all the process steps will be performed that will later be used in an industrial-scale plant; the aim of which is to confirm the technological feasibility of the sunliquid technique. "The results we obtain in Straubing will enable us to plan industrial production plants efficiently and economically, and ultimately to realize such plants in cooperation with partners," continued Koltermann.

The sunliquid process is an innovative biotechnological method that turns plant waste products such as grain straw and corn straw into second-generation cellulose ethanol.

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Clariant is an internationally active specialty chemical company, based in Muttenz near Basel. The group owns over 100 companies worldwide and employed 22 149 employees on December 31, 2011. In the financial year 2011, Clariant produced a turnover of CHF 7.4 billion. Clariant is divided into eleven business units: Additives; Catalysis & Energy; Emulsions, Detergents & Intermediates; Functional Materials; Industrial & Consumer Specialties; Leather Services; Masterbatches; Oil & Mining Services; Paper Specialties; Pigments; Textile Chemicals.

Clariant focuses on creating value by investing in future profitable and sustainable growth, which is based on four strategic pillars: Improving profitability, innovation as well as research and development, dynamic growth in emerging markets, and optimizing the portfolio through complementary acquisitions or divestments.