Price awarded by ADEME and Pollutec for increased production yield of bio-hydrogen using PROTÉUS enzyme cocktail

Nîmes, France, January 18, 2013 - A prize for Innovative Techniques for the Environment was awarded last November by French ADEME and Pollutec to a team of INRA in Narbonne for his collaborative work with Proteus on intensification of production of bio-hydrogen by fermentation from lignocellulosic residues (wheat straw).

This work, co-led by Hélène Carrère, Claire Dumas and Eric Trably of the Laboratory of Environmental Biotechnology from INRA Narbonne, France was made using an enzyme cocktail developed by Proteus. This cocktail was used both for the pretreatment of the fermentative pathway (two-step process: hydrolysis and dark fermentation) but also, and this is an innovative result, by direct addition to the fermenter (one step process).

Some results of this work have been published in the scientific International Journal of Hydrogen Energy *. Whatever the method (1 or 2 steps) and the type of wheat straw used (sterile or non-sterile) production of hydrogen per gram of organic straw is doubled by the addition of enzyme cocktail of Proteus.

Award Innovative Techniques for the Environment at the Pollutec in November 2012. From left to right Juliette Martin, CEO of Proteus SA, Hélène Carrère, Research Director at INRA, Marine Bittel, trainee researcher Proteus hosted by INRA in Narbonne and Cécile Persillon, chief scientist of Proteus. Photo: R.BOURGUET / ADEME.

For more information:

* *Effect of enzyme addition on fermentative hydrogen production from wheat straw* M. Quémeneur; M. Bittel; E. Trably; C. Dumas; L. Fourage; G. Ravot; JP Steyer; H. Carrère *International Journal of Hydrogen Energy* Volume 37, Issue 14, July 2012, pages 10639–10647 (http://dx.doi.org/10.1016/j.ijhydene.2012.04.083)

About Protéus, a member of PCAS Group

Protéus (www.proteus.fr) is a biotechnology company specialized in the design, development and implementation of sustainable industrial processes using enzymes and microbial strains. To fulfill this mission, Protéus benefits from a portfolio of proprietary technologies including a collection of exclusive microbial biodiversity, technologies for enzymes engineering and microbial strains optimization, and a platform of enzyme production and formulation to turn them into industrial tools. A member of the chemical Group PCAS, Protéus also benefits from the industrial capabilities and expertise of the Group. The PCAS Group (www.pcas.com) is a fine and specialty chemicals Group which shares an ambition for excellence with its customers, which primarily include market-leading international groups. PCAS designs and delivers the best industrial solutions for its customers' specific expectations. These various expectations all share a common demand for safety, quality, competitiveness, innovation and sustainability.

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