

ZeaChem Further De-Risks its Biorefining Process Using Proven Industrial Processes

Company Creates Salable Glacial Acetic Acid, the Building Block for Cellulosic Ethanol and Bio-based Chemicals

Lakewood, Colo. – February 16, 2010 – ZeaChem Inc., a developer of biorefineries for the conversion of renewable biomass into fuels and chemicals, today announced it has produced bio-based acetic acid at the purity concentration level of a salable product. Acetic acid is a commercial product and is also ZeaChem’s intermediate building block for the production of cellulosic ethanol and bio-based chemicals.

Earlier this month, ZeaChem announced its 10,000 times scale-up fermentation results, which successfully demonstrated the commercial scalability of the company’s front-end fermentation process using an acetogen, a naturally occurring organism. Using the broth produced in those fermentation runs, the company has now concentrated the acetic acid using an industry proven process called solvent extraction. This process is extremely energy-efficient compared to the more common distillation process. The acetic acid concentration achieved is highly pure, known in the industry as glacial acetic acid.

“ZeaChem’s biggest fermentation hurdles are now behind us and we have significantly de-risked future integrated operations,” said Jim Imbler, president and chief executive officer of ZeaChem. “Using commercially available processes, we have successfully produced salable, bio-based acetic acid from our fermentation. ZeaChem has taken a big step toward producing high yield, economical and sustainable cellulosic ethanol and chemicals.”

“As we observed, these results prove the successful concentration to glacial acetic acid using commercially available equipment,” said Tom Schafer, Vice President of Koch Modular Process Systems, Inc.

The results surpassed ZeaChem’s demonstration plant targets for acetic acid recovery and purity, and the results have been replicated using two different commercial vendors. Acetic acid is salable to various manufacturing industries for the production of film, bottles and fibers among other products. Global demand for acetic acid is 14.3 billion pounds per year. Current U.S. production capacity is nearly 6 billion pounds per year with sales of approximately \$1 billion.

ZeaChem

With these results, ZeaChem is moving forward using proven esterification technology for further product conversion. Esterification converts acetic acid into ethyl acetate, a high-value salable product and the chemical precursor of ZeaChem produced cellulosic ethanol.

ZeaChem intends to scale to a commercial biorefinery upon successful operations at its 250,000 gallon-per-year facility, which is proposed to be built in Boardman, Oregon. The core technology of the facility will begin to come online in 2010.

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About Koch Modular Process Systems, LLC

Koch Modular Process Systems, LLC. (KMPS), headquartered in Paramus, New Jersey, specializes in the design and supply of modular mass transfer systems engineered to fulfill the Chemical, Pharmaceutical, Petrochemical, Biotech, Food and Flavor & Fragrance Industries' increasingly challenging purification requirements.

KMPS custom engineers every modular distillation and chemical separation system specifically for each application. All products are sold with a Process Performance Guarantee. Our systems are typically designed for solvent recovery, chemical purification, steam & wastewater stripping, PEG, MACT and environmental regulation compliance, carbon dioxide & acid gas absorption and more. Our technical expertise includes binary and multicomponent distillation, extractive distillation, azeotropic distillation, reactive distillation, liquid-liquid extraction, absorption, stripping, heat transfer, fluid flow, instrumentation and controls.

KMPS can also provide process studies, laboratory and pilot plant testing, VLE development and complete process design engineering packages.

Please visit www.modularprocess.com for more information.

About ZeaChem Inc.

ZeaChem Inc. has developed a cellulose-based biorefinery platform capable of producing advanced fuels and intermediate chemicals. ZeaChem's indirect approach leapfrogs the yield and carbon dioxide (CO₂) problems associated with traditional and cellulosic based biorefinery processes. In addition, ZeaChem has a significant capital cost advantage compared to other cellulosic technologies. By efficiently extracting the most energy possible from biomass feedstocks, ZeaChem significantly increases output while reducing both production costs and environmental impacts. Incorporated in 2002, ZeaChem is headquartered in Lakewood, Colo. and operates a research and development laboratory facility in Menlo Park, Calif.

The logo for ZeaChem, featuring the company name in white text on a green rectangular background with a grey bar underneath.

ZeaChem

Please visit www.zeachem.com for more information.

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