



2225 W. Harrison St., Suite F
Chicago, IL 60612
312-997-2150 telephone
312-997-2160 fax

Xylitol Production Process

Partnering Opportunity

About zuChem

zuChem is a biotechnology company specializing in the development of proprietary bioprocesses for the production of unique carbohydrates and glycochemicals for the food and pharmaceutical markets. The Company has offices in Chicago, Illinois as well as research facilities in Peoria, Illinois.

Xylitol

Xylitol is a naturally occurring sugar polyol that has a sweetening property matching that of sucrose, but contributes one-third less calories. It is used extensively in a variety of confectionary products such as candies and gums. Xylitol has been implicated in the prevention of dental caries, and is thought by many to be anti-cariogenic thus making it the best nutritive sugar substitute with respect to the prevention of dental cavities.

Xylitol growth has been severely limited because of price and, more importantly, supply constraints. Current processes for the manufacture of xylitol require pure xylose, which is expensive and in limited supply. This in turn has made xylitol end users reluctant to launch new products containing xylitol. If price and supply limitations were to be removed, it has been estimated that the market for xylitol could grow significantly, particularly in the U.S. zuChem's proprietary process has been designed to overcome the supply constraint by removing the requirement for pure xylose, while also providing a significant cost of goods advantage.

The zuChem Process

zuChem has developed a fermentation process for the production of xylitol using a hemicellulose (i.e. a C5/C6 sugar mixture) feedstock instead of the purified xylose required by traditional chemical manufacturing methods. The process is capable of utilizing hemicellulose produced from a variety of biomass feedstocks, including corn cob, corn fiber, sugar cane bagasse, hardwood, softwood, and many other agricultural biomass sources. Additional development is underway to produce xylitol from either glycerol or glucose.



The zuChem process is protected by a variety of patent applications currently pending worldwide. The process is ready for transfer to manufacturing pilot scale. zuChem has also established a number of relationships with potential customers wishing to purchase xylitol product.

Business Opportunity

zuChem is currently seeking strategic partners for this program, in particular manufacturing partners with large scale fermentation capabilities (greater than 100,000 gallon scale) interested in producing xylitol for customers in the food ingredients industry in North America and other territories. We are additionally seeking parties able to supply large quantities of hemicellulose feedstock to drive commercial xylitol production by the zuChem process.

For more information, please contact David Demirjian, CEO (ddem@zuchem.com) or Rajni Aneja, Vice President, Corporate Development (raneja@zuchem.com).