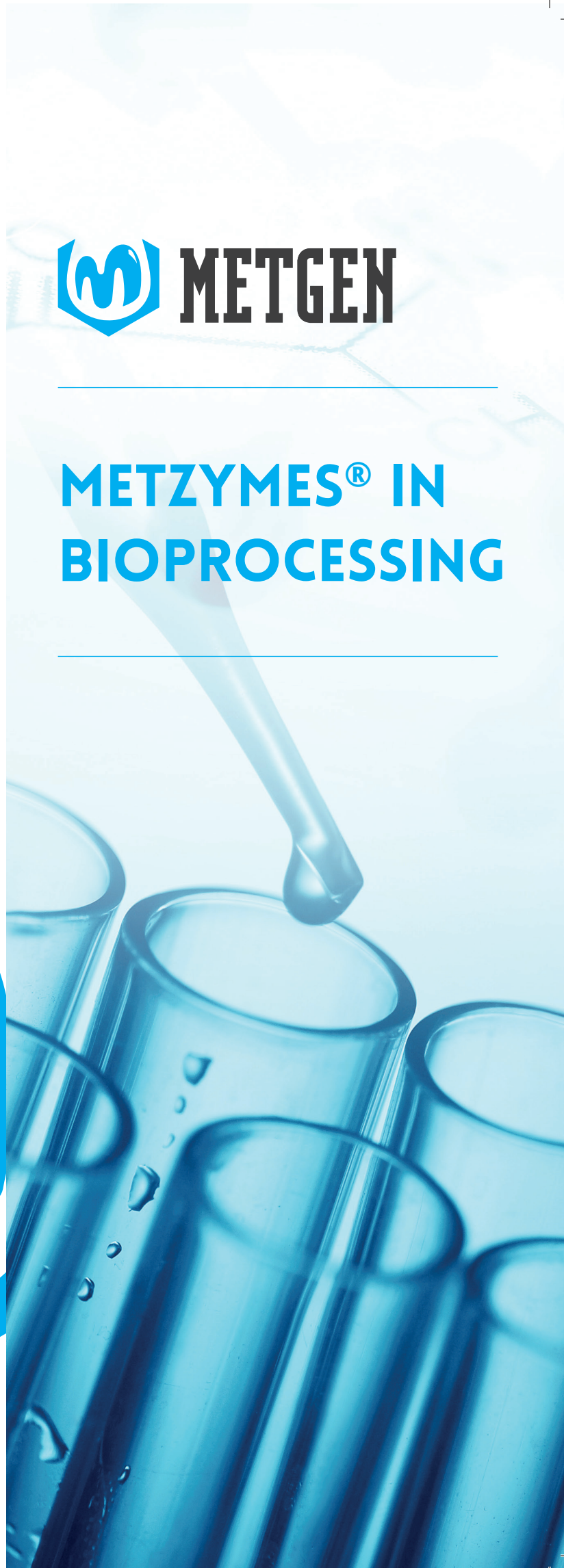
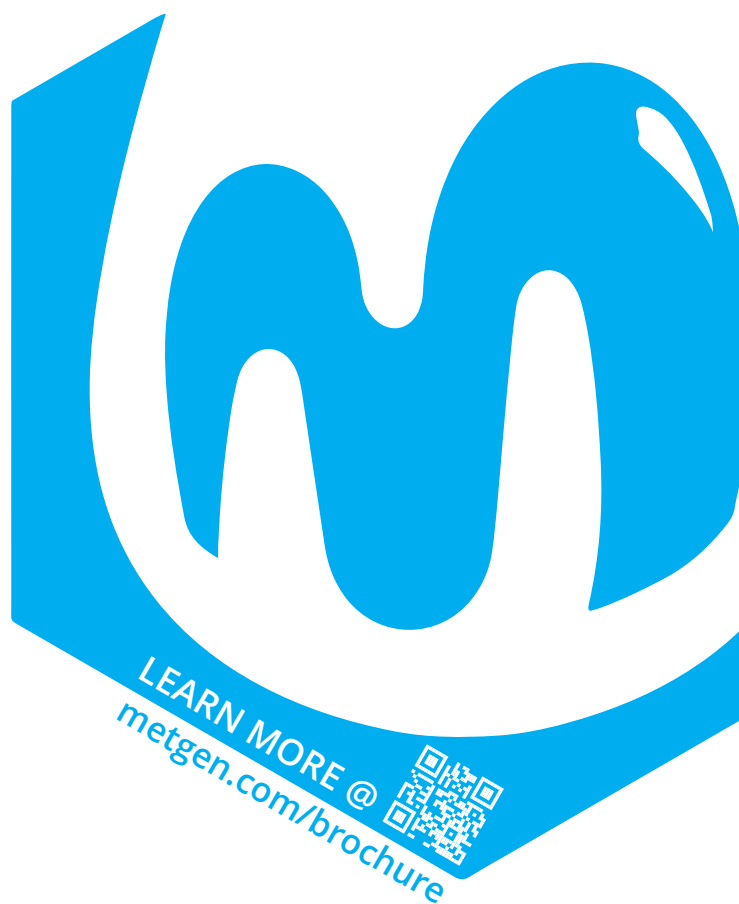


MetGen is a Finnish biotech company developing and supplying industrial enzymes and enzymatic processes. The main focus of the company is to provide enabling enzymatic solutions for ligno-cellulosic biomass valorization and sustainable bio-economy. One of the latest achievements in this area is MetGen's enzyme MetZyme® FORCI. The enzymes have been designed to provide enhanced process performance by increasing production speed and biogas yield.

www.metgen.com



METZYMES® IN BIOPROCESSING



METZYMES® COVER THE FULL VALUE-CHAIN IN BIOPROCESSING

LIGNO™ to create tailored, unique feed-stock and pre-treatment combinations

SUNO™ for hydrolysis and fractionation to achieve higher yields of sugars

SUNO™ and **PURECO™** for fermentation with higher carbon yield and less inhibitors

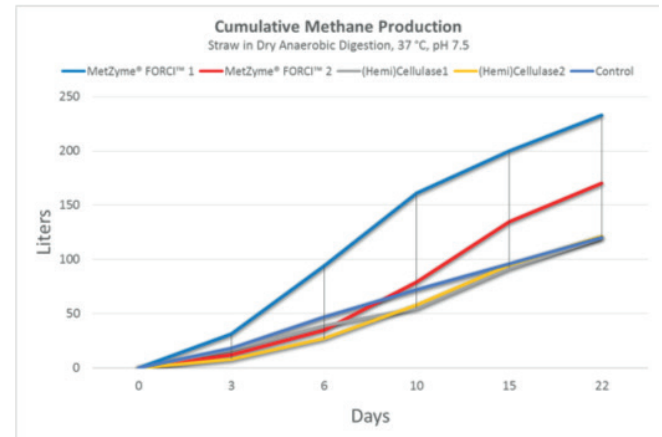
PURECO™ to create chemical building blocks: further conversions to e.g. furans and aromatics, lignin-based materials and platform sugars

FORCI™ for water and biogas processes to neutralize toxins, and decreased waste streams

**EMPOWERING
INDUSTRIES TO
ENHANCE VALUE
OF BIOMASS
USING ENZYMATIC
SOLUTIONS**



METZYME® FORCI™ ACCELERATES BIOGAS METHANE PRODUCTION AT BATCH AND CONTINUOUS PROCESSES



VARIETY OF APPLICATIONS

RAW MATERIAL

RESULTS ACHIEVED

Corn silage/straw: biogas production with less expensive feed.

Raw material substitution. 10€/ton cheaper. Improved speed of gas production.

Straw/corn silage: Feed viscosity control to enhance biogas production.

Even degradation of feed-mix improving gas yield.

Straw: Gas production speed improvement.

Higher digester feed through-put. Lower CAPEX enabled.

Debarking and RCF waste water: Effluent biogas.

Improved gas yield. Faster gas production. Improved effluent plant operation. Better utilization of toxic waste water.

High pectin content i.e. Beets: Viscosity reduction.

Lab level: cleaving pectin at biogas reactor conditions. Improve overall operation.