



Pilot Development Services

Save millions by contracting ICM's pilot facility to help move your research to commercial reality

Whether you are ready to prove out your process for commercialization or you need help with perfecting a process, ICM's premier fermentation pilot plant and support lab should be the first place you look.

- Reduce infrastructure costs for your pilot work by utilizing our \$15M research center
- Assure accurate, reliable, and confidential results while reducing staffing hassle and expense by relying on our team of experts
- Leverage ICM's industry-leading experience in the design of commercial biofuels production
- Benefit from our in-house analytical capabilities, which can be tailored to suit your needs



the energy of innovation™

Prove your technology at a state-of-the-art pilot plant, with research assistance from ICM's process technology experts

ICM is offering a unique opportunity to prove your technology in our state-of-the-art, large-scale pilot facility. Staffed by some of the nation's most experienced scientists, researchers, engineers, and plant operators—men and women who helped build the ethanol industry from the ground up—this 10,000 sq. ft. facility is among the best in the world to test grain/sugar-to-energy processes.

Established to conduct studies on the full range of grain ethanol processes, our pilot plant is rated at a 1-million-gallons-per-year (MGY) capacity. Our facility is available on a limited basis to assist select customers with the development and commercialization of their technology.



Gain access to the world's premier ethanol process research center for a fraction of the cost of doing it yourself

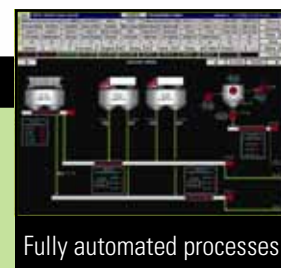
The ability to utilize ICM's renowned pilot facility is a huge factor in our customers' decisions to use our services. Couple that with the day-to-day support of the many of the industry's foremost experts and innovators in ethanol process technology, and it becomes very difficult to justify a decision to incur the capital expense and investment in regulatory compliance that would be necessary to conduct your process development anywhere else.

Our customers come to us with exciting new ideas. They want to run numerous scenarios, test multiple organisms, ask "what happens if..." They want to prove out their ideas as the next step toward commercialization of their successes. They may have contemplated building their own pilot facility, but what they are really after is results, not ownership of an expensive research facility that adds unnecessary development costs and slows product development.

ICM's pilot facility and laboratory, located adjacent to an operational 50 MGY ethanol facility in St. Joseph, MO, already has the equipment you need, with many regulatory and permitting needs in place. This optimized facility significantly reduces the infrastructure costs necessary to conduct your research and provide proof of concept on a larger pilot scale. It also offers the opportunity to pull full-scale process streams from the co-located 50 MGY facility, removing variables from the piloting process.

Capabilities include:

- Feedstock handling and milling
- Feedstock conversion to sugars
- Fermentation to product
- Beer well (One 15,000 gal. beer well)
- Anaerobic fermentation tanks (4) x 15,000 gal.
- Cook
- Jets
- Distillation
- Evaporation
- Product recovery
- Process-specific backset



Fully automated processes



Bench-top capabilities also available

Not quite ready for a 1 MGY trial? Our facility also contains a fully equipped, sophisticated laboratory to perform bench-top research.



Ready to learn more?

**Call us today
for a quote.**

316.977.6785

Capabilities include:

- Aerobic fermentation tanks (3) x 50 L; (1) x 500 L; (1) x 12,000 L
- Dry fractionation
- Additional independent operations available with flexible configuration
- Future capabilities in cellulose and other promising new feedstocks

A "Dream Team" with second-to-none experience to help prove your technology

ICM hires the best and brightest talent from a variety of complementary industries. We have assembled a gifted team of professionals with an extraordinary knowledge base in the conversion of grain and cellulose to sugar, as well as various fermentation products. Our staff has been responsible for developing, designing, proving, installing, and starting up the technology behind more than half of the annual U.S. ethanol production capacity, and they stand ready to coordinate your testing and/or assist with the development of your ideas.

As ICM projects progress through the development cycle, this team of research scientists, engineers, craftsmen, and plant operators bring decades of hands-on, in-the-field experience together to reach toward the common goal of developing energy solutions for tomorrow and beyond. By contracting ICM's Pilot Research Services, you have the opportunity to harness that passion and experience, putting our know-how to work for you.

We can help introduce your technology to our customers

As North America's leading ethanol plant process technology provider, ICM can help you with your commercialization efforts. With process technology in 102 operating facilities, equipment in even more, and a relationship with a majority of the ethanol industry, ICM is one of the most trusted companies in biofuels.

Because of our role in overseeing your testing and our assistance in developing your technology, as your idea achieves success and moves beyond pilot testing to full-scale commercialization, ICM would be in a position, after evaluation of your idea, to introduce you to ICM customers at ICM-designed plants who may be interested in your technology. We can help introduce your product, and your company, to a pre-existing customer base that is eager to evaluate new ideas for improving efficiencies and enhancing revenue



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