

Large-Scale Production Of Potassium Ferrate

Columbus, OH — The wait is over. [Ferratec](#) [1] and R&D partner [Electrosynthesis](#) [2] have successfully scaled up [Battelle](#) [3]'s ferrate process technology, which means the powerful chemical oxidizer that was once nearly impossible to get in large quantities is now available by the kilogram. Battelle had shown the material, valuable to chemists the world over, could be produced in bench-scale quantities with their process. Ferratec licensed the process and now, with partner Electrosynthesis, has successfully completed pilot-scale trials and is ready to move to full-scale production.

“Based on this initial pilot-scale work, we are ready to continue scale-up so that ferrate can be manufactured in commercial quantities,” said Andy Wolter, principle partner of Ferratec. “We’re eager to see broad adoption of Ferratec brand ferrate in the marketplace.”

Potassium ferrate(VI) (K_2FeO_4) has many applications, including as a biocide, as a powerful oxidizer in organic synthesis and as a water treatment compound. Until now, potassium ferrate’s use has been much desired but extremely limited because it was impossible to obtain in large, stable quantities at a practical price. Discovered 300 years ago, potassium ferrate has been known as a powerful oxidizing agent but there has not been a cost-effective and high-yield manufacturing process—until now.

Unlike other potassium ferrate sources, typically created in liquid or slurry forms and only in bench scale quantities, Ferratec brand ferrate is 95 percent pure, contains no chlorides or other halogen impurities and is shelf stable. An additional attraction of ferrate is that it is environmentally friendly because its decomposition byproduct basically is rust. Because ferrate now can be manufactured in kilogram quantities, Ferratec (a subsidiary of [The Incubation Factory](#) [1],) expects to sell the product well below current market pricing.

Spencer Pugh, Battelle’s vice president and manager of Industrial and International Markets, said, “We are very pleased with the outstanding scale-up work done by Electrosynthesis and the dedication shown by our licensee Ferratec.”

About Ferratec Ferratec is a holding company with the exclusive license to manufacture and distribute potassium-ferrate world-wide under the process developed with Battelle. Ferratec was formed by the private investment and business incubation firm, The Incubation Factory, with the objectives of partnering with Battelle to complete the final phase of manufacturing scalability and partnering with established industry experts to bring potassium-ferrate to the global market. Ferratec is headquartered in Saint Louis, MO at the headquarters of The Incubation

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Factory.

The Incubation Factory (TIF) is a for-profit, “go to market” business and technology incubator specializing in high-growth, business-to-business opportunities. TIF works with independent entrepreneurs, investors, private and public companies as well as universities, Innovation Centers, and various other state and federal programs. TIF’s goal is to bring valuable products, services, and technologies to market. TIF serves companies from a wide array of industries; the current portfolio includes companies in healthcare, information technology, fragrance delivery, veterinary medicine, RFID, WiFi, and others. Ferratec is one of three active TIF commercialization initiatives with Battelle. TIF’s early success included three of the eight initial companies growing at a rate to qualify for Inc. 500 recognition. In 2003, TIF company, Advanced Business Fulfillment (ABF), was Inc. 500’s fastest growing company in Missouri and the 23rd fastest nationwide. ABF was subsequently sold to WebMD for \$260,000,000.

About Electrosynthesis Company, Inc Electrosynthesis Company, Inc. (www.electrosynthesis.com [2]) is an internationally recognized research and development company specializing in electrochemical technology. To date, the Company has completed more than 200 different R&D projects for clients developing technologies in application areas including electrochemical synthesis, energy storage, electrodialysis, and other electrochemically driven membrane separations. Electrosynthesis Company works closely with its Vancouver-based engineering partner NORAM Engineering and Constructors Ltd. for commercialization and scale-up of electrochemical processes.

About Battelle As the world’s largest independent research and development organization, Battelle provides innovative solutions to the world’s most pressing needs through its four global businesses: Laboratory Management, National Security, Energy Technology, and Health and Life Sciences. It advances scientific discovery and application by conducting \$5.2 billion in global R&D annually through contract research, laboratory management and technology commercialization. Headquartered in Columbus, Ohio, Battelle oversees 20,400 employees in more than 130 cities worldwide, including seven national laboratories that Battelle manages or co-manages for the U.S. Department of Energy and the U.S. Department of Homeland Security and two international laboratories—a nuclear energy lab in the United Kingdom and a renewable energy lab in Malaysia.

Battelle also is one of the nation’s leading charitable trusts focusing on societal and economic impact and actively supporting and promoting science, technology, engineering and math (STEM) education.

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[1] <http://www.theincubationfactory.com/>

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[3] <http://www.battelle.org/>