

Voyageur Pharmaceuticals Advances Mueller Iodine Extraction Process with 99.8% Purity Results and Planned Field Pilot Testing

written by Raj Shah | August 10, 2026

August 10, 2026 ([Source](#)) – Voyageur Pharmaceuticals Ltd. (TSX.V: VM) (OTC Pink: VYYRF) (“Voyageur” or the “Company”), a Canadian developer of pharmaceutical-grade barium and iodine contrast media for medical imaging, is pleased to provide an update on the advancement of its proprietary patent-pending Mueller iodine extraction process.

The Mueller process is being developed to recover high-purity iodine from iodine-rich oilfield brine, supporting Voyageur’s strategy to establish a domestic iodine supply for the North American radiology contrast media market, while offering oil and gas producers and midstream water operators a new pathway to generate value from produced brine. Recent laboratory work has successfully produced iodine at 99.8% purity, with overall process recovery exceeding 90%.

Houston Laboratory Progress and Field Pilot Deployment

Voyageur has established a laboratory and fabrication site in Houston, Texas, dedicated to advancing the Mueller process using Anadarko and Permian Basin produced water. Laboratory operations have demonstrated the process under controlled conditions and generated clean brine suitable for disposal or reinjection, consistent with zero-liquid-discharge performance objectives.

With a field-capable pilot unit now built and field testing set to begin in the coming weeks, the Mueller process is moving beyond bench-scale validation toward continuous, real-world field operation using unaltered oilfield brine, a distinction the Company views as critical for any technology intended for commercial deployment.

Laboratory and lab pilot highlights achieved to date include:

- Production of iodine at 99.8% purity
- Overall recovery exceeding 90%
- Continuous operation using real oilfield brine feed
- Constructed a mobile, field-capable pilot unit sized to 80,000 L/d
- Generation of clean brine suitable for integration into existing disposal, reinjection, or clean feed for DLE and desalination infrastructure
- Validation of key process parameters supporting scale-up to field deployment
- Completed a preliminary design basis for a 200 mt/y plant
- Completed techno-economic and environmental validation supporting a low-cost OPEX and environmental profile

The Company is constructing a transportable, small-scale iodine extraction field unit designed to treat up to approximately 80,000 litres per day on a batch-continuous basis. The pilot unit is scheduled to commence field testing in the coming weeks, with operations planned for September 2026.

Field testing is expected to provide operating data under real-world conditions and support the design basis for modular, relocatable production units capable of recovering iodine from iodine-rich oilfield brine. Voyageur's modular production concept is designed to allow 200 tonne/yr field units to be

deployed at multiple saltwater disposal sites, where iodine concentrate can be produced and transported to a central hub for final polishing, prilling, and packaging.

Engineering and Scale-Up Planning

Engineering and project planning are progressing to support the continued development of the Mueller process from laboratory validation to field demonstration and commercial-scale design. Current work is focused on finalizing process systems for iodine polishing, prilling, and packaging, while further defining the modular field unit and central processing hub configuration.

Subsequent engineering phases are expected to advance through front-end loading stages, including concept design and basic design, to define a practical demonstration-scale configuration. This work is intended to improve engineering definition, refine cost estimates, and support future commercial deployment planning.

Strategic Context

For oil and gas operators, produced water midstream companies, and investors focused on the energy value chain, produced brine represents a largely untapped resource: billions of barrels are handled and disposed of each year at meaningful cost, while only a small fraction of the iodine they contain is ever recovered. Voyageur's goal is to be the first company to change that equation. The Company is working to build what it believes will be the first economically profitable, field-proven iodine extraction process, helping lead the broader industry's effort toward brine valorization.

Voyageur's vertically integrated strategy aims to improve supply-chain security, reduce reliance on imported raw materials, and lower operating costs for the production of

medical imaging contrast agents. The Mueller process is a key component of this strategy, as iodine is a critical raw material used in iodinated contrast media.

“The continued advancement of the Mueller process is an important step in Voyageur’s plan to develop a reliable North American source of high-purity iodine,” said Brent Willis, President and Chief Executive Officer of Voyageur. “Achieving 99.8% purity and greater than 90% recovery in laboratory testing using real oilfield brine provides meaningful technical validation as we prepare for field pilot operations. This work supports our broader strategy of building a secure, vertically integrated supply chain for radiology drugs. As part of its long-term vertically integrated manufacturing strategy, Voyageur plans to develop iodine production capacity of up to 1,000 tonnes per year to support its future iodine-based contrast pharmaceutical production requirements.”

Mr. Willis added: “Our staged approach is designed to validate iodine recovery in the field, advance modular production, and ultimately support future iodine-based drug manufacturing. By developing the Mueller process alongside our Frances Creek barium project and planned manufacturing capabilities, Voyageur is working to position itself across key parts of the medical imaging contrast media value chain.”

The Company will provide further updates as field testing begins, operating data is collected, and additional technical milestones are achieved.

About Voyageur Pharmaceuticals Ltd.

Voyageur, a Canadian public company trading under the symbol VM on the TSXV, is in development of barium and iodine Active Pharmaceutical Ingredients (API) and intends to offer high-performance, cost-effective imaging contrast agents. With a

strategic focus on vertically integrating the barium and iodine contrast markets, Voyageur aims to become a key player by producing its own barium & iodine. Voyageur has developed five barium contrast products that have Health Canada licenses.

Voyageur's business plan is set to generate cash flow by partnering with established third-party GMP pharmaceutical manufacturers in Canada, thereby ensuring the validation of its products by regulatory agencies worldwide. As Voyageur solidifies its presence in the market, it plans to transition into a high-margin domestic manufacturer of radiology drugs, further expanding its revenue streams.

At the core of its operations, Voyageur owns a 100% interest in the Frances Creek barium sulfate (barite) project. Currently, the world's pharmaceutical barium sulfate is almost entirely synthetically produced which management believes results in a less effective imaging quality product. Voyageur's Frances Creek resource boasts a rare and high grade mineral suitable for the pharmaceutical marketplace that Voyageur believes will replace the current synthetic products with higher quality lower cost imaging products.

Voyageur's ambitious vision is to become the first vertically integrated company in the radiology contrast media drug market. By controlling all primary input costs, from the sourcing of raw materials to final production, Voyageur intends to ensure quality and cost efficiency. With its approach, it embodies the motto of **"From Earth to Bottle,"** highlighting Voyageur's commitment to responsible sourcing and manufacturing practices.

For Further Information:

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This news release may contain certain forward-looking statements and forward-looking information (collectively, “forward-looking statements”), including without limitation: the successful field pilot testing and successful development of the Mueller iodine extraction process; obtaining Health Canada, FDA and other international regulatory approvals with reasonable timelines; the testing, refining, market launch, manufacturing, sales and revenue from Voyageur’s barium and iodine contrast products; the Company’s business plan and the Company successfully raising additional financing to support the business plan; the Company’s aim to become a key player in the barium and iodine contrast markets; the Company’s plan to transition into a high-margin manufacturer of radiology drugs; the Company’s belief that the Frances Creek Project’s mineral will replace the current synthetic products in the pharmaceutical marketplace with higher quality imaging products; and the Company’s belief that it can ensure quality and cost efficiency by controlling all primary input costs. Forward-looking statements normally contain words like “will”, “intend”, “anticipate”, “could”, “should”, “may”, “might”, “expect”, “estimate”, “forecast”, “plan”, “potential”, “project”, “assume”, “contemplate”, “believe”, “shall”, “scheduled”, and similar terms. Forward-looking statements are not guarantees of future performance, actions, or developments and are based on expectations, assumptions, and other factors

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