

USM SSP 22_002 Notice of Proposed Sole Source Purchase of Thermo Fisher Scientific Process 11
Twin Screw Extruder (TSE)

http://www.ms.gov/dfa/contract_bid_search/Bid

RFx: 3150003811

Comments/objections will be received as required per Section 31-7-13 (C) of the Mississippi Code until 8:00 a.m. (Central Time) on August 30, 2021.

Any person or entity that objects and proposes that the commodity listed is not sole source and can be provided by another person or entity shall submit a written notice to:

Steve Ballew

Director of Procurement & Contracts 118 College Dr. Box 5003 Hattiesburg, MS 39406

bids@usm.edu

Phone: 601-266-4131

Subject Line must read "Sole Source Objection"

The notice shall contain a detailed explanation of why the commodity is not a sole source procurement. Appropriate documentation shall also be submitted if applicable.

If after a review of the submitted notice and documents, USM determines that the commodity in the proposed sole source request can be provided by another person or entity, then USM will withdraw the sole source request publication from the procurement portal website and submit the procurement of the commodity to an advertised competitive bid or selection process.

If USM determines after review that there is only one (1) source for the required commodity, then USM will appeal to the Public Procurement Review Board. USM will have the burden of proving that the commodity is only provided by one (1) source.

Run Dates: 8/21, 8/28

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The University of Southern Mississippi anticipates purchasing the item(s) listed below as a sole source purchase. Anyone objecting to this purchase shall follow the procedures outlined below.

1. **Description of the commodity that USM is seeking to procure:** The Thermo Fisher Scientific Process 11 twin screw extruder (TSE) is a bench-top, co-rotating parallel twin screw extruder with a barrel diameter of 11 mm and a barrel width of 40:1 L/D.

2. **Explanation of why the commodity is the only one that meets the needs of the agency:**
The Process 11 TSE possesses many unique features that make it an ideal instrument for research and education and are not available from other suppliers. The instrument will be employed for externally funded research and education of our more than 100 users (faculty, students, and staff) in SPSE. The Process 11 clam-shell design allows ease of access to the extruder's segmented screws and aids in efficient cleaning between runs. With the unique integrated electronics, the Process 11 TSE allows for a minimal footprint that only requires 82x48x41 cm (LxWxH) of bench top space and also is lightweight (55 kg) allowing for portability, ideal for research and teaching laboratory locations. The Process 11 TSE is scalable to larger extruders (such as the EuroLab 16 and the TSE 24 MC; USM owns each of these larger extruder models) with a Da/Di ratio of 1.72 and has the capability to decrease the L/D ratio from 40 to 10:1 to reduce residence time for processing heat sensitive materials. Additionally, the Process 11 TSE has capability to be paired with liquid feeders, single-screw feeders, twin-screw feeders, rototube feeders and more. The extruder is designed to allow for convenient feeder placement – on top of the gear box, behind the

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extruder barrel or in front of the extruder barrel. Furthermore, the extruder allows for a direct connection with the HAAKE MiniJet Pro micro injection molding system permitting a sample be taken directly from the melt in the extruder to produce different parts and specimens for characterization.

3. **Explanation of why the source is the only source is the only person or entity that can provide the required commodity:** The University of Southern Mississippi currently owns two other Thermo Fisher Scientific TSE's: EuroLab 16 and TSE 24 MC. Obtaining the Process 11 will facilitate the easy scale-up and scale-down between small and large-scale extrusion processes. Moreover, our familiarity with Thermo Fisher Scientific twin screw extruder products will also expedite the process of gaining operational knowledge for the Process 11. Although there are some other products which directly compete with the Process 11 TSE on the same size range, Thermo Fisher Scientific is the only manufacturer that can provide a truly modular TSE. It is the only manufacturer that offers variable barrel length to accommodate for the different processing requirements for different materials and a multitude of options for feeder type and location.

4. **Explanation of why the amount to be expended for the commodity is reasonable:** Polymer melt processing performance and analysis are integral requirements for polymer science and engineering research and education, core to the SPSE program at USM. The twin-screw extruders currently accessible to SPSE researchers and students (on campus and at MPI) are quite large in size, and hence studies involving expensive raw materials

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and materials present in low quantities are significantly hindered. The Process 11 TSE, quoted at \$183,869.67, is sold at the lowest price compared to its larger counterparts because of its significantly small footprint. At the same time, it displays matching performance, modularity of features, and superior user-friendliness. Also, purchasing the Process 11 will be a one-time, long-term investment which will support ongoing education and research for our students, faculty and staff.

5. Efforts that the agency went through to obtain the best possible price for the commodity:

Advertisement Schedule	Date
1st scheduled	August 21, 2021
2nd scheduled	August 28, 2021

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steve.ballew@usm.edu

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