

Mississippi State University
Notice of Proposed Sole Source Purchase

267-041

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

1. Commodity or commodities to be purchased (make, model, description):

Rtec Instruments – Surface Characterization System is a fully integrated platform for instrumented indentation, scratch testing, tribology, 3D optical profilometry, and coating thickness measurement. Designed for research laboratories, quality control, and industrial materials development, it delivers unmatched flexibility by combining multiple characterization techniques within a single modular system. The system includes:

- SMT-5000 Platform
 - Benchtop frame for Indentation, Scratch etc. with In line Inspection
- Scratch Test Module - Capacitive based with Piq Nanoindentation
 - Measures both down force and friction force using capacitive force sensors. Patented 3D automatic image synchronization. Force vs depth measurements.
- Lambda Head - Multi Mode Optical Profiler with High Precision Z Drive
 - Confocal, Interferometry, Dark field and Bright field imaging modes

2. Explanation of the need to be fulfilled by this item(s), how is it unique from all other options, and why it is the only one that can meet the specific needs of the department:

Rtec's surface characterization system is the only commercially available, modular system that combines the following unique features, including 3 patented technologies:

- Patented In-line 3D Profilometer for visualization of scratch: US20170067735A1
- Method for determining hardness of a material with implementation of three-dimensional imaging: US20220373442A1
- Capacitance based load cells for high resolution force characterization: US10775247B1
- Modular platform for plug-and-play exchange/addition of features in the future such as rotation stage, high frequency reciprocating wear tests, AFM, RAMAN etc.

3. Name of company/individual selling the item and why that source is the only possible source that can provide the required item(s):

The equipment mentioned above is available solely from Rtec Instruments, and the company sells its equipment directly to customers. There is no separate distribution channel, or value-added resellers, that can provide this equipment.

4. Estimated cost of item(s) and an explanation why the amount to be expended is considered reasonable:

The quote provided by Rtec totals \$98,978. This quote is for a custom solution. We have had extensive conversations with other surface characterization system manufacturers to ensure this cost is reasonable. The cost includes shipping, installation, on-site training, and ancillary equipment necessary to operate the system.

5. Explanation of the efforts taken by the department to determine this is the only source and the efforts used to obtain the best possible price:

MSU personnel are experts in materials characterization and have had discussions with multiple manufacturers in the industry over the past year. There are no other vendors for the SMT-5000, a fully integrated platform for instrumented indentation, scratch testing, tribology, 3D optical profilometry, and coating thickness measurement. The uniqueness of this machine is unmatched by any vendor we are aware of.

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:

Jennifer Mayfield, CPPO
Director of Procurement Services, Chief Procurement Officer
jmayfield@procurement.msstate.edu
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, MSU determines that the commodity in the proposed sole source request can be provided by another person or entity, then MSU 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 MSU determines after review that there is only one (1) source for the required commodity, then MSU will appeal to the Public Procurement Review Board. MSU will have the burden of proving that the commodity is only provided by one (1) source.