

MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2026-399
Item to be Scouted	Nuclear Magnetic Resonance (NMR) spectrometer
Days to be scouted	30
Response Due By	08/28/2026
Description	ASTM D7171 Benchtop NMR NMR/EL TATD requires a benchtop NMR capable of performing quantification of

Section 2: Technical Information

Type of supplier being sought	Manufacturer
Reason	2nd Supplier
Describe the manufacturing processes (elaborate to provide as much detail as possible)	The manufacturing of a benchtop NMR involves the precision integration of high-performance electronics and materials science. The core is a permanent magnet assembly, typically utilizing high-grade neodymium magnets precision-machined and shimmed to ensure a highly homogeneous magnetic field. A radiofrequency (RF) probe is then engineered and tuned to the specific resonance frequency of hydrogen nuclei. The system is encased in a thermally stable housing and integrated with high-speed digital signal processors (DSPs) and specialized software that converts raw electromagnetic signals into a readable spectrum. Finally, the unit undergoes rigorous calibration using certified reference standards to ensure compliance with the ASTM D7171 specification.
Provide dimensions / size / tolerances / performance specifications for the item	The instrument shall comply with the following specifications: Low-resolution/Time-Domain NMR spectrometer Hydrogen Proton Nucleus Permanent magnet requiring no cryogen Low-field system Internal magnet temperature control Sample tube diameter 18 mm Support the use of PTFE plugs Pre-loaded software for ASTM D7171 Sample tempering block capable of maintaining temperature within 0.2 degrees Celsius Capable of test chamber thermal control at 35 or 40 degrees Celsius plus/minus 0.1 degrees Celsius. Dimensions cannot exceed 65 cm x 50 cm x 33 cm (L x W x H) and cannot exceed 130 kg.
List required materials needed to make the product, including materials of product components	plastic molding, permanent magnet,
Are there applicable certification requirements?	No
Are there applicable regulations?	Yes
Details	Needs to be compliant with ASTM D7171
Are there any other standards, requirements, etc.?	Yes
Details	Needs to be compliant with ASTM D7171
Additional Technical Comments	

Section 4: Business Information

Estimated potential business volume	1 per year
Estimated target price / unit cost information (if unavailable explain)	\$30,000 USD
When is it needed by?	6 months
Describe packaging requirements	individually wrapped and palletized
Where will this item be shipped?	Ann Arbor, MI

Additional Comments

Is there other information you would like to include?	Office of Air and Radiation (OAR)/ Office of Transportation and Air Quality (OTAQ) / Transportation and Air Technology Division (TATD)
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