

MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2026-532
Item to be Scouted	Thermal Desorption Unit (TDU)
Days to be scouted	30
Response Due By	10/23/2026
Description	Thermal Desorption system able to accommodate 7" desorption tubes compatible with gas chromatographs with automated sampling

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 outer enclosure is comprised of steel or aluminum cut using CNC or pressed from sheet metal for the outer enclosure then powder coated for durability in chemical laboratory environments. The heating block is CNC-machined from materials with high thermal conductivity and stability, such as aluminum, brass or specialized alloys. Any metallic components that are in direct contact with the sample stream are deactivated using a chemical vapor deposition process to apply an ultra-thin, inert silicon layer to resist chemical interaction between the sample and instrument. High-wattage resistant heaters are imbedded into the the thermal block. High precision sensors or thermocouples are installed adjacent to the tube sleeve. The printed circuit board features proportional-integral-derivative controllers are populated and programmed. Temperature is controlled to 0.1 degrees Celsius and can be rapidly ramped up to 720 degrees Celsius/minute. All sub-assemblies are mounted into a main chassis that fits above the gas chromatograph mass spectrometer.
Provide dimensions / size / tolerances / performance specifications for the item	Thermal control: 10 to 1000 degrees Celcius, with 0.1 degree Celcius precision Maximum heating rate up to 720 degree Celcius/minute Maximum transfer temperature: 350 degrees Celcius Dimensions (maximum): 120 cm wide by 85 cm tall by 55 cm deep Positioning accuracy of the sampler shall be plus/minus 0.1 mm Physical dimensions shall not exceed the width of a commercial single quad gas chromatograph mass spectrometer Cryogenic cooling of the programmed temperature vaporizing inlet body using liquid nitrogen to -180 degree Celsius Leak free pneumatics Capable of automated pyrolysis of solid samples up to 1000 degrees Celcius Capable of accepting 7 inch thermal desorption tubes Capable of on-line internal standard addition Capable of dynamic headspace

List required materials needed to make the product, including materials of product components	Powder coated steel or aluminum plate Machined high-grade brass, aluminum or copper alloys Glass and deactivated fused silica Chemical Vapor Deposited silicon coatings for all stainless steel sample transfer lines Proportional solenoid valves and electronic pressure controllers Coiled or cartridge high-wattage resistive heating elements High precision RTD or thermocouples High Torque stepper or brushless DC servo motors, reinforced rubber timing belts Precision lead screws/ball screws for sub-millimeter positional accuracy Polymer mechanical grippers to lift and transport glass sample tubes from aluminum or plastic storage trays Printed circuit boards featuring microcontrollers, motor driver chips and temperature control loops
Are there applicable certification requirements?	No
Are there applicable regulations?	No
Are there any other standards, requirements, etc.?	No
Additional Technical Comments	

Section 4: Business Information

Estimated potential business volume	1
Estimated target price / unit cost information (if unavailable explain)	\$120,000
When is it needed by?	3 months
Describe packaging requirements	Individually boxed units
Where will this item be shipped?	Ann Arbor, MI

Additional Comments

Is there other information you would like to include?	Environmental Protection Agency Office of Air and Radiation ? Office of Transportation and Air Quality ? Transportation and Air Quality Division ? Fuel Compliance Branch
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