Mississippi State University  
Notice of Proposed Sole Source Purchase

189-26

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):

The Mississippi State Chemical Laboratory (MSCL) requests to purchase as a sole source item the Agilent 1260 Infinity II Liquid Chromatograph coupled to an Agilent 6470 Triple Quadrupole System (LC-MS/MS). This unit would consist of the multicolumn thermostat (G7116A), multisampler (G7167A), quaternary pump (G7104C), and mass spectrometer (G6470AA).

1. 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:

The MSCL is mandated under Mississippi Code, Title 57, Chapter 21-9 to provide analytical, chemical, and bacteriological services for regulatory control, in cooperation with the Mississippi Department of Agriculture and Commerce. One service provided to the state is the identification and quantitation of various chemicals, specifically pesticides. This new LC-MS/MS would replace one of the existing LC-MS/MS currently used by the lab that has become not practicable to maintain and no longer provides the sensitivity required for certain analysis. The current system being replaced is also a LC-MS/MS provided by Agilent. Unfortunately, Agilent is the only manufacture that offers JetStream technology, which provides such sensitivity. Based upon the MSCL’s research, the Agilent 6470 MS has the following characteristics:

* JetStream technology using superheated nitrogen which aids desolvation and improves the concentration of ions reaching the capillary, thereby improving sensitivity and reducing noise
* MRM sensitivity Signal-to Noise ratio (S/N) ESI positive (1 pg of resperpine): S/N > 75,000:1 (typical in this price range is 30,000:1)
* MRM sensitivity Signal-to Noise ratio (S/N) ESI negative (1 pg of chloramphenicol): S/N > 30,000:1 (typical in this price range is 30,000:1)
* MRM sensitivity Instrument Detection Limit (IDL) ESI positive (10 fg of resperpine): IDL < 4.0 fg
* MRM sensitivity Instrument Detection Limit (IDL) ESI negative (10 fg of chloramphenicol): IDL < 4.0 fg
* Mass range: *m/z* 5-3,000 (typical in this price range is a max of ~2,000 *m*/*z*)
* Polarity Switching: 25 ms
* Mass resolution: 0.7 Da
* Mass accuracy: 0.14 Da for *m/z* 5-999
* Dynamic MRM transitions: Up to 4,000 dynamic MRM transitions per method

The MSCL requires a “workhorse” triple quadrupole mass spectrometer that is capable of analyzing low part-per-billion to part-per-trillion levels of hormones, herbicides, pesticides, mycotoxins, dyes, amino acids, and peptides. An instrument with above characteristics would meet the needs required by the MSCL.

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

The company selling the Agilent 6470 Triple Quadrupole LC/MS is Agilent Technologies. No other instrument manufacturer sells new Agilent 6470 Triple Quadrupole LC/MS units.

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

The estimated cost of the Agilent 6470 Triple Quadrupole LC/MS would be $355,129.31. This amount is reasonable considering that the MSCL analyzes thousands of samples a year for various analytes sometimes totaling over $200,000. The instrument would most likely be paid for in under 5 years.

1. 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:

MSCL personnel have attended exhibitions at meetings of the American Chemical Society and AOAC International to speak with different instrument manufacturers about their tools available for testing of pesticides. Considering all the information, the MSCL feels that the Agilent 6470 LC-MS/MS is the only viable long-term option.

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:

Don Buffum, CPPO  
Director of Procurement & Contracts  
[dbuffum@procurement.msstate.edu](mailto:dbuffum@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.

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