

Mississippi State University
Notice of Proposed Sole Source Purchase
234-100

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):

Direct Mercury Analyzer (DMA -80evo) TriCell Double Beam Analyzer - Integrated Sample Drying, Thermal Decomposition, Amalgamation and Spectrophotometry

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:

MSCL monitors food safety for the State, and water quality for MDEQ. MSCL also supports research for marine health, all of which requires analysis for elemental mercury at low levels.

The DMA-80 is the unique mercury analyzer enabling analysis without frequent or daily calibrations. It has dedicated systems to cover low/ standard range (dual and tri cells systems) and high concentration (wide range system), without changing the set up or making new calibrations. The DMA-80 configurations allow it to measure the signal in two or even three different cells for each sample, with a consequent automatic integration based on the mercury content.

The DMA-80 doesn't only comply with EPA method, but it is the only system mentioned in the UPEPA 7473 and used for the development of this method, therefore it fulfils the method requirements and performance. It works with quartz boats, offering low porosity (no memory effect), ideal for low level detection and guarantees longer lifetime and lower running costs.

The DMA-80 spectrophotometer is designed to achieve high performance with minimal maintenance, in fact it does not use splitters or other technologies that require maintenance and can be a source of signal reduction (if dirty).

The DMA-80 works with compressed air, through our dedicated air compressor or any compatible compressor. The use of compressed air further reduces the cost per sample, as it will avoid the use of expensive oxygen.

The DMA-80 EVO may come with the unique "Double-Beam" feature which ensures superior signal stability, enhanced signal to noise ratio, better reproducibility, and improved performance

event close to the detection limit (ppt levels). This is accomplished by the unique feature of keeping the same light intensity between reference detector and detectors of analysis.

The DMA-80 EVO can achieve enhanced productivity with up to 40 positions plates with "on-the-fly" sample loading.

The DMA-80 EVO can achieve up to 1000°C decomposition temperature which facilitates the release of mercury even from inorganic samples (geological samples) and ensures fast cooling option to reduce the cooling time between each analysis.

The core of the DMA-80 EVO is the unique catalyst and amalgamator. Their advanced design, developed throughout the 20+ years of experience, secure reliable analysis, and full conversion of all Hg species.

The catalyst tube removes interferences and converts all Hg species into elemental Hg.

The amalgamator traps the Hg and thanks, to its unique composition it enables fast releasing of Hg leading to symmetric peaks and avoiding tails for a more accurate analysis.

The Milestone DMA-80 as all Milestone products come together with a unique to Milestone tool called "Milestone Connect":

Web based app for most devices (PC, tablet, or smartphones) to control/monitor the unit and includes an extensive library of information (list of parts, technical notes, user manuals, video tutorials, updated application notes, a complete library of relevant scientific articles, and an online help section.

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

Milestone Inc -Jesse Jones, Sales Rep There are other analyzers out there, but they do not analyze for elemental mercury at the low levels we are analyzing for, Detection Limit: 0.0003 ng Hg.

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

\$50,410.90 is reasonable because the DMA-80 analysis is cheaper per sample. There is no need for sample prep and the DMA-80 doesn't use argon. The ICP/MS is the only other instrument that can get close to the results of the DMA-80, but requires a complicated and time consuming sample extraction and does use a large quantity of argon. Argon currently costs \$338 per dewar

and we would need two dewars per week for our sample load. We purchased an ICP/MS in 2018 and at the time it cost over \$63,000.

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:

MSCL has conversed with other laboratories doing the same elemental mercury analysis and Milestone's Direct Mercury Analyzer is the instrument of choice. Our own on-line research also found Milestone to be the best buy with quick easy analysis, training and support.

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
Interim Deputy Director of Procurement & Contracts
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.