UNIVERSITY OF MISSISSIPPI

Notice of Intent to Certify Sole Source

SS 051

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

Commodity or commodities to be purchased (manufacturer, model, description):

Molmex Scientific Inc. LS Instruments 3D LS Spectrometer

The need to be fulfilled by this item(s) and why it is the only one that can meet the specific needs of the department:

We need an instrument capable of both polarized static and dynamic light scattering and depolarized dynamic light scattering at a range of angles in order to characterize the colloidal properties for a wide range of researchers on campus. Specifically, we have identified at least nine faculty whose research will benefit from the acquisition of a light scattering system. The identified research projects require the characterization of the hydrodynamic radius, radius of gyration, molecular weight, size distribution, 2nd virial coefficient, Rayleigh ratio, and structure factor while incorporating methods to eliminate the contributions of multiple scattering from concentrated solutions such as hydrogels. Given the wide range of samples that will be characterized, from dilute polymer solutions to very concentrated turbid hydrogels, we need an instrument that includes: (1) variable angle measurement of light scattering; (2) a high output laser (i.e. 100 mW) for weakly scattering samples and depolarized dynamic light scattering; (3) polarizers for depolarized dynamic light scattering; (4) a sample goniometer for measurements of non-ergodic systems (e.g. gels, glasses, foams) by continuous rotation of the sample; (5) 3D cross correlation technology for suppression of multiple scattering events; (6) modulation of the 3D cross correlation to increase the signal-to-noise for light scattering measurements; (7) class 1 laser safety rating during routine operation; (8) a computer-controlled external temperature controlled bath to enable measurements at varying temperatures; and (9) the capability to measure light scattering in low volumes for precious samples such as proteins and nucleic acids where utilizing larger volumes would be cost prohibitive. The 3D LS Spectrometer is the only light scattering instrument that enables suppression of multiple scattered light in Static and Dynamic Light Scattering (SLS and DLS) experiments at scattering angles from 12°-155° with a resolution of 0.01°. Without this suppression of multiple scattering, accurate characterization of concentrated and turbid solutions is not possible. Multiple scattered light is suppressed by means of the 3D cross-correlation technique. The 3D cross-correlation technique effectively

increases the concentration range of the samples that can be measured with both DLS and SLS. Furthermore, the 3D LS Spectrometer is the only instrument that can be upgraded with the patented modulated 3D cross-correlation technique. This technique significantly improves the signal to noise ratio in 3D cross-correlation experiments. There is only one other commercially available instrument that is based on the 3D cross-correlation technique (Nanophox, Sympatec, Germany). The Nanophox however can only measure at one single scattering angle (90°). It can thus only perform DLS at this specific scattering angle. It is not possible to perform SLS experiments with the Nanophox.

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

Molmex Scientific is the sole US distributor for LS Instruments.

Submission Instructions and Format of Response from Objecting Parties:

Interested parties who have reason to believe that the item(s) above should not be certified as a sole source should provide information in the following format for UM to use in determining whether or not to proceed with awarding the Sole Source purchase.

1.1 **Interested Party Information**

1.1.1 **Contact Name, Phone Number, Address and email address**

1.1.2 **Company Website URL, if applicable**

1.2 **Objection to Sole Source Certification**

1.2.1 **Interested parties must present specific objections to the Sole Source certification using the criteria listed above.**

1.2.2 **A statement regarding the Interested Party's capabilities as related to this Sole Source Certification Request.**

1.3 **Comments will be accepted at any time prior to Tuesday, November 1, at 3:00 pm (Central Time) to Katherine Jones at kajones4@olemiss.edu (with Cc: to purchase@olemiss.edu) at The University of Mississippi Procurement Services Department, 164 Jeanette Phillips Drive, PO Box 1848, University, Mississippi 38677. Responses may be delivered by hand, via regular mail, overnight delivery, or e-mail. The envelope or email should reference the sole source number. UM WILL NOT BE RESPONSIBLE FOR DELAYS IN THE DELIVERY OF RESPONSES. It is solely the responsibility of the Interested Parties that responses reach UM on time. Interested Parties may contact Katherine Jones to verify the receipt of their Responses.**

Responses received after the deadline will be rejected.

If after a review of the submitted notice and documents, UM determines that the commodity in the proposed sole source request can be provided by another person or entity, then UM will withdraw the sole source certification and submit the procurement of the commodity to an advertised competitive bid or selection process.

If UM determines after review that there is only one (1) source for the required commodity, then UM will appeal to the Public Procurement Review Board for approval to purchase.