

CLASSIFICATION CODE: 66 – Laboratory Equipment and Supplies

SUBJECT: NOTICE OF INTENT TO SOLE SOURCE: DEUTERATED POLYMERS

SOLICITATION NUMBER: NB610020-17-02550

RESPONSE DATE: April 20, 2017

CONTACT POINTS: January Magyar, Contract Specialist, 301-975-5442
Cory Worley, Contracting Officer, 301-975-3635

DESCRIPTION:

The Department of Commerce, National Institute of Standards and Technology (NIST), intends to negotiate a firm-fixed-price purchase order, on a sole source basis, with Polymer Source, Inc. of Quebec, Canada for the purchase of deuterated polymers under other than full and open competition by the authority of FAR subpart 13.106(1)(b).

The NIST Center for Neutron Research (NCNR) is a user facility providing neutron scattering measurement capability that is among the best in the world. Approximately 2000 guest researchers from around the world visit the facility every year as well as NIST/NCNR staff and postdocs. At the NCNR one of the ways it uses neutrons is to take advantage of their ability to allow NCNR to select what it would like to see of a sample (contrast match). This helps NCNR understand better the structure and behavior of the sample. The Small Angle Neutron Scattering and Neutron Spin Echo instruments at the NCNR make significant use of this “contrast match” technique. The only way to take advantage of this technique is if the researchers use deuterated chemicals combined hydrogenated chemicals to prepare their samples. The success of the sample preparation is critical for the success of the experiment and the quality of the publication. Because of the nature of the facility NCNR need not only the results to be reproducible but the chemicals to be available as quickly as possible. Deuterated chemicals are difficult to make and very expensive.

NIST’s NCNR requires the procurement of fully deuterated PS polymer star samples as well as fully deuterated PVME polymer matrix chains in order to apply neutron spin-echo spectroscopy on dynamically asymmetric and isotopically labeled star-linear polymer blends to critically evaluate, for the first time, the role of star architecture of a glassy polymer on the microscopic dynamics of a mobile low-Tg linear chains at space-time resolution relevant to segmental and collective motion.

To ensure the success of the experiment it is required that NCNR use chemicals that are produced by the same company. Companies will make their chemicals using different techniques; the purity of the resulting chemical will vary between companies and this can have a direct effect in the results of the experiment. Another issue is the availability of the chemicals. At the NCNR experimental time is precious and difficult to get so it is critical that NCNR have the chemicals available in a timely fashion.

Preliminary NSE measurements have already been performed on the hydrogenated/deuterated mixture of PVME, in the absence of the PS star polymers and preliminary rheological data have been collected as well from the deuterated chemicals provided by Poly Source Inc.

Therefore, Polymer Source Inc. is uniquely qualified to provide the required deuterated polymers for this experiment.

Delivery shall be FOB Destination, Gaithersburg, MD, and be completed in accordance with the Contractor's commercial schedule.

The North American Industry Classification System (NAICS) code for this acquisition is 325211, and the size standard is 1,250 employees.

No solicitation package will be issued. This notice of intent is not a request for competitive quotations; however, interested persons may identify their interest and capability to respond to this requirement. The Government will consider responses received by 3:00 p.m. (EST) on April 20, 2017. Inquiries will only be accepted via email to january.magyar@nist.gov. No telephone requests will be honored.

A determination by the Government not to compete the proposed acquisition based upon responses to this notice is solely within the discretion of the Government. Information received will normally be considered solely for the purpose of determining whether to conduct a competitive procurement in the future.