



Athens, October 12, 2011

## Call for tenders for equipment supply

The present call for tenders concerns the project "Nanobioenviro" (project code: 09 ΣΥΝ-42-699) financed by the National Action "Cooperation" – Activity 1, of the Regional Operational Programme of Attica, Priority Axis 3 "Competitiveness, innovation and digital convergence" and co financed by the European Regional Development Fund and national resources.

More specifically for the needs of the project the following equipment is needed:

### **ANALYTICAL INSTRUMENT FOR THE MEASUREMENT OF ZETA POTENTIAL, PARTICLE SIZE AND MOLECULAR WEIGHT**

At least with the technical specifications below:

#### **A. MAIN INSTRUMENT**

1. It should be of desktop type.
2. It should be a small size system. Dimensions should be mentioned.
3. The system will not weight more than 20Kg.
4. Zeta potential measurement will be based on M3-PALS (Phase Analysis Light Scattering) technique.
5. Molecular Weight measurement will be based on SLS (Static Light Scattering) technique.
6. Particle Size measurement will be based on NIBS (Non-Invasive Back Scatter) technique.
7. Zeta potential and particle size should be measured in the same cell.
8. The system should be able to measure zeta potential in high salt systems.
9. It should have a small size cuvette with the specifications below:
  - a. No maintenance, calibration and alignment are required.
  - b. A wide range of cuvettes for size, zeta potential and molecular weight should exist.
  - c. It should be able for low volume sample measurement for valuable proteins and biopolymer samples.
  - d. It should be able to analyze sample size with little or no dilution.
  - e. If required, it should be able to be used for both aqueous and non-polar dispersants such as hydrocarbons.
  - f. Cell's electrodes should be Gold plated beryllium/copper.
10. Size range for Zeta Potential measurement should be 5nm-10µm.
11. Range for Particle Size measurement should be 0.6nm-6µm (sample dependent).
12. Measurement angle for Particle Size measurement will be 173°.
13. The system will be able for Molecular Weight measurement. Range should be:  $1 \times 10^3 - 2 \times 10^7$  Da (sample dependent).
14. The system will be able to measure low sample volumes. Specifically, <0,8ml for



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Zeta Potential measurement, 12µl for Particle Size measurement and at least 20µl for Molecular Weight measurement.

15. The system should integrate a laser: 4mW He - Ne, 633nm.
16. The laser should comply with Class 1, EN 60825-1:2001 and CDRH
17. The system should integrate an avalanche photodiode detector: Q.E. >50% at 633nm.
18. It should integrate an automatic laser attenuator with transmission range: 100%-0.0003%.
19. It should be able to measure Zeta Potential for samples having conductivity up to 200mS/cm.
20. It should have a working temperature range: 2°C – 90°C
21. It should be able for condensation control integrating purge facility using dry air.

#### B. SOFTWARE

1. It should provide fully automated operation – for ease of use.
2. It should integrate «Standard Operating Procedures (SOPs)» capabilities, for repeatability between operators, systems and sites.
3. It should integrate full range of statistical plots.
4. It should provide time and temperature trend analysis capabilities.
5. It should integrate a custom report generator function.

#### C. GENERAL REQUIREMENTS

1. The system must be delivered with every accessory required in order to be fully installed and fully operating.
2. The system should be accompanied by suitable PC system.
3. It should be accompanied by consumables kit for the first period of operation.
4. Training of at least one (1) day must be provided.
5. The system must be covered by at least one (1) year of warranty.
6. The manufacturer should have an ISO 9001:2008.
7. The manufacturer should have a distributor in Greece, fully qualified with experienced support team, able to support the quoted system in full.
8. The manufacturer must have installed in Greece more than five (5) systems, same as the quoted one.

The tenders should be addressed by e-mail to [klerifo@eie.gr](mailto:klerifo@eie.gr) or at the National Hellenic Research Foundation, 48, Vassileos Constantinou Ave. c/o Mrs K. Foniadaki, until

**28/10/11.**

#### Submission Documents

Each tender must consist of a **Technical description** and a **Financial offer**.

Additionally, each supplier must submit a detailed company profile as well as a letter certifying that they have not been convicted for any offences and that they are not operating under bankruptcy regime.

#### Selection Criteria

It is noted that the main selection criterion will be the combination of the price and the exact specifications of the equipment. The flexibility in the time-plan for the settlement of payments will be also taken into account.

