

## Particle size and Zeta potential measurement system (Nano ZS90, Malvern, UK) with autotitrator (MPT-2)



► **Specific components:** Zetasizer equipment coupled with autotitrator (MPT-2) for automatic measurements according to pH, dilution or addition; laser excitation source at 633 nm with detection at 90° and a computer with the Zetasizer program); disposable cuvettes for quick and precise measurements (folded capillary cell - Minimum volume: 750 µL, deep cell - 750 µL, Cell for high concentrations - 150 µL);

► **Performances:** measures time- and temperature-dependent fluctuations of light intensity scattered by particles in Brownian motion; allows the non-invasive determination of the size distribution and zeta potential of different nanostructures and nanoparticles in suspension; characterization of the hydrodynamic diameter of proteins or colloids at temperatures up to 120°C; Zeta potential provides information on the stability of colloids; the autotitrator allows the automation of measurements according to pH and concentration; minimum measurement volume: 20 µL; particle size for potential measurements: 3.8 nm - 100 µm; maximum particle size measurement range: 0.3 nm - 5 µm; possibility of measurement in non-aqueous environments;

► **Total value:** 215.760 Lei (aprox 49.000 Euro)

► **Aquisition year:** 2010

► **Applicability:** Adsorption/desorption on/from the surface of some particles (ions, polymers, antibodies, etc.); characterization of proteins in solution; thermal denaturation, conformational modification of proteins; particle aggregation, sedimentation and solubilization studies; antibody-antigen interactions; materials science; pharmaceutical studies, etc.

► **Availability for Access and Use**

Contact persons:

**Monica Focșan**, CS I (email: monica.iosin@ubbcluj.ro, 0264454554/int 116)

**Monica Potara**, CS II (email: monica.potara@ubbcluj.ro, 0264454554/int 116)

Available for a pre-evaluation of the complexity of the samples and estimation of the working time, in the **9:30 - 17:30 interval**, based on a preliminary email or phone appointment.

**Usage conditions:** exclusively by the personnel responsible for the mentioned specialty

**Analysis price - extern UBB:** Preliminary evaluation – free of charge; Measurement of zeta potential: 150 lei/sample; Measurement of hydrodynamic diameter: 150 lei/sample

**Analysis price - intern UBB:** free of charge