DIMENSIONAL AND COMPOSITIONAL ANALYSIS OF NANO- AND MICRO-PARTICLES USED IN FOOD, PERSONAL CARE PRODUCTS AND PHARMACEUTICAL FORMULATIONS

GOALS

- Development of methods for the separation and/or extraction and pre-concentration of particulate material from complex matrices.
- Development of separation methods, based on the Field-Flow Fractionation techniques to determine physico-chemical parameters (mass, sizes, density) of nano- and micro-particles in food productsand personal care products.
- Physico-chemical characterization of nano- and micro-particles used as drug-delivery systems.

INSTRUMENTS AND METHODS

Several analytical techniques are needed to achieve the aims of this research, such as the Field Flow Fractionation (FFF), the optical emission spectroscopy (AES) and the optical absorption spectroscopy (AAS), the liquid chromatography (HPLC) and the electron microscopy.

MAIN SUBJECTS

Separation Sciences; Food Chemistry; Pharmaceutical Technologies.

RESEARCH GROUP

Catia Contado
Alberto Cavazzini
Luisa Pasti
Nicola Marchetti
Maria Chiara Pietrogrande
Maurizio Remelli

COLLABORATIONS

The team collaborates with colleagues within UniFe (Prof. A. Dalpiaz, Prof. R. Cortesi, Dr. E. Esposito) and with International teams (University of Namur - Belgium, University of Bordeaux – France, Postnova – Germany).