

FIELD-FLOW FRACTIONATION STUDY OF NANOPARTICLES

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ABSTRACT

The increasing interest and developments in the fields of nanomaterials, medicine and biology have highlighted the extraordinary properties and the potential of nanoparticles (carbon nanotubes, quantum nanodots, gold and silver nanoparticles, micelles etc).

The analysis and quantification of these particles are therefore becoming of increasing importance and in this respect the more established chromatographic techniques such as size exclusion chromatography, high performance liquid chromatography, hydrodynamic chromatography and in particular field-flow fractionation will play an essential role in the separation and analysis of these compounds (1).

In this study we will present method development for the characterisation and separation of the relevant aqueous suspended nanoparticles and will discuss the challenges and difficulties that need to be overcome during the analysis of these compounds.

References:

- (1) Messaud, F. A.; Sanderson, R. D.; Runyon, J. R.; Otto, T.; Pasch, H.; Ratanathanawongs Williams, S. K. *Progress in Polymer Science* **2009**, 34, 351-368.