

The role of chromatography and mass spectrometry in protein biopharmaceutical analysis

Abstract

Protein biopharmaceuticals are on the rise! These recombinantly produced therapeutic macromolecules currently account for 20% of the total pharmaceutical market and today monoclonal antibodies are considered the fastest growing class of therapeutics. Their success is driven by their efficacy in disease areas with a high unmet medical need such as oncology, autoimmune and infectious diseases.

From a structural point of view, protein biopharmaceuticals come with a complexity highly demanding towards analytics. Unraveling this structural complexity demands for a wide range of complementary analytical tools and methodologies with chromatography and mass spectrometry at the forefront.

In this short course, an overview will be provided of the different chromatographic and mass spectrometric approaches applied in biopharmaceutical analysis. Emerging trends such as multidimensional chromatography and native mass spectrometry will furthermore be touched upon. All this will be illustrated with real life examples from the presenter's laboratory.

Biography

Koen Sandra received a PhD degree in Biochemistry from the Ghent University, Belgium in 2005. After his PhD, he joined Pronota, a molecular diagnostics company where he was active in developing analytical platforms for disease biomarker discovery and in setting up external collaborations. In 2008, he joined RIC, a company that provides chromatographic, electrophoretic and mass spectrometric support to the chemical, life sciences and pharmaceutical industries, where he holds the position of CEO. As a non-academic scientist, Koen Sandra is author of over 50 highly cited scientific papers and has presented his work at numerous conferences as an invited speaker.