

# CARBOHYDRATE-ANALYSIS: LIQUID CHROMATOGRAPHY TO SOLVE A CHALLENGE

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Carbohydrates in their variety and complex chemical composition play an important role in chemical processes, in pharmaceutical industry, Food and Beverage and many others. The common necessity of the mentioned market segments and applications is to analyze the carbohydrates for both quantification and structural information to understand properties. Compared to spectroscopy (e.g. NMR), or compared to separation techniques requiring derivatization (e.g. GC), modern liquid chromatographic techniques (LC) allow for the direct analysis of native and derivatized carbohydrates. Methods such as GPC, HILIC, Reversed Phase and Ion exchange chromatography can be used to gather information about carbohydrates in complex mixtures. This presentation will cover the different application areas, showing examples for different separations. We will discuss the use of different approaches depending on the specific analytical question. One focus will be on the separation technique used, as well as on the detection scheme, like MS-hyphenation and modern electrochemical approaches.