P-33 DEVELOPMENT OF STOPPED-FLOW ENANTIOSELECTIVE HPLC-CD METHODS: TOWARDS THE STEREOCHEMICAL CHARACTERIZATION OF *C*-UNDECYLRESORCIN[4]ARENES

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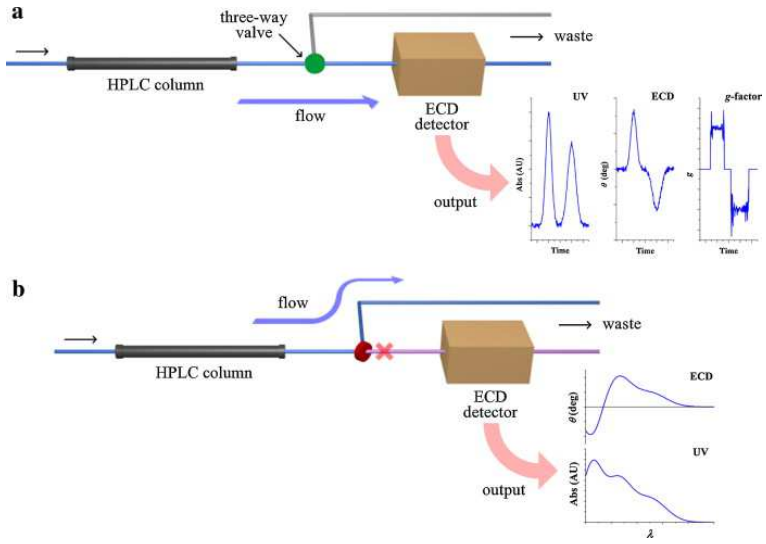
When enantioselective high-performance liquid chromatography (eHPLC) is hyphenated with detection systems based on chiroptical properties, in particular circular dichroism (CD), the stereochemistry of a chiral analyte can be fully determined. Indeed, eHPLC-CD systems allow the simultaneous assessment of the absolute configuration of stereoisomers and the evaluation of the enantiomeric/diastereomeric composition of samples. These features are particularly important in pharmaceutical analysis, because the assignment of the absolute stereochemistry of drugs is essential to establish reliable structure–activity relationships [1]. An extremely useful application of the eHPLC-CD technique is given by the stopped-flow method: the chromatographic fractions of the analyzed chiral compound are trapped inside the cell of the CD detection system, allowing the measurement of full UV and CD spectra without time-consuming collections of the pure stereoisomers for standard CD spectroscopic analysis. We report the development and application of stopped-flow eHPLC-CD methods for the resolution of a series of inherently chiral *O*-substituted *C*-undecylresorcin[4]arenes, recently synthesized by weak-base-promoted *O*-alkylation [2], with the future aim of characterizing their stereochemistry by means of density functional theory (DFT) calculations.



[1] C. Bertucci, D. Tedesco, Advantages of electroniccirculardichroismdetection for the stereochemicalanalysis and characterization of drugs and naturalproducts by liquidchromatography, J. Chromatogr. A 1269 (2012) 69–81.
[2] F. Farina, C. Talotta, C. Gaeta, P. Neri, Regioselective*O*-substitution of *C*-undecylresorcin[4]arene, Org. Lett. 13 (2011) 4842–4845.