Title:	Pre-column Derivatization and Separation of Diastereomeric-Derivatives of Racemic Mexiletine and Confirmation of Elution Order and Molecular Configuration
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Abstract:	Present study describes the synthesis of cyanuric chloride based four active chiral reagents (ACRs) and their application in the enantiomeric separation of (RS)-mexiletine. Herein, four cyanuric chloride-based ACRs were prepared by introducing L-proline derivatives under nucleophilic substitution reaction. The synthesized ACRs were characterized by different spectroscopic techniques. Racemic mexiletine hydrochloride was used for the enantio-recognition study. All the four ACRs were used to convert (RS)-mexiletine into related diastereomeric derivatives and then separated on the C18-column of RP-HPLC. The different parameters such as sample amount, the concentration of mobile phase, organic modifier and pump pressure were varied to optimize separation conditions. The energy-minimized structures of synthesized diasteromeric derivatives (DDs) were developed using DFT calculations. The validation study was conducted for the developed method and correlation-coefficient, calibration range, LOD and LOQ calculated. The stability and recovery were calculated by inter and intraday assay.
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