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ENANTIO-RESOLUTION OF (+)- BUPROPION BY REVERSED PHASE HIGH PERFORMANCE LIQUID CHROMATOGRAPHY USING CYANURIC CHLORIDE BASED CHIRAL DERIVATIZING REAGENTS HAVING AMINO ACIDS AS CHIRAL AUXILIARIES

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Enantio-separation of (+)- bupropion was achieved as its diastereomers which were prepared with chiral derivatizing reagents (CDRs) synthesized from cyanuric chloride. Two sets of CDRs each consisting of five CDRs were prepared by nucleophilic substitution of Cl atom in cyanuric chloride with amino acids (namely, L Leu, L Val, L Phe, D Phg and L Ala) as chiral auxiliaries to give dichloro-s-triazine (DCT) and other five new CDRs were prepared by nucleophilic substitution of Cl atom in 6 butoxy derivative of cyanuric chloride with the above mentioned amino acids. The diastereomers were synthesized under microwave irradiation for 70 or 90s at 80% power and by conventional heating method. Separation of diastereomers was achieved using C₁₈ column and an isocratic eluting mixture of acetonitrile and aqueous trifluoroacetic acid. Separation efficiencies of the two sets of CDRs, among themselves and among the two groups, have been compared based on resolution (Rs) and difference between the retention times of resolved diastereomers. The method was validated for detection limit, linearity, accuracy and precision.

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