

Nanoparticles Using in Chiral Analysis with Different Methods of Separation

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Abstract : Chiral molecules in relation to particular biological roles are stereoselective. Enantiomers differ significantly in their biochemical responses in a biological environment. Despite the current advancement in drug discovery and pharmaceutical biotechnology, the chiral separation of some racemic mixtures continues to be one of the greatest challenges because the available techniques are too costly and time-consuming for the assessment of therapeutic drugs in the early stages of development worldwide. Various nanoparticles became one of the most investigated and explored nanotechnology-derived nanostructures, especially in chirality, where several studies are reported to improve the enantiomeric separation of different racemic mixtures. The production of surface-modified nanoparticles has contributed to these limitations in terms of sensitivity, accuracy, and enantioselectivity that can be optimized and therefore makes these surface-modified nanoparticles convenient for enantiomeric identification and separation.

Keywords : chirality, enantiomeric recognition, selectors, analysis, surface-modified nanoparticles

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