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Phosphorus Containing Achiral Reagents for the Determination of Enantiomeric Composition of Chiral Alcohols

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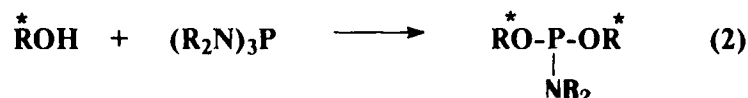
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Phosphorus Containing Achiral Reagents for the Determination of Enantiomeric Composition of Chiral Alcohols

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It is shown that P_4S_{10} and $(R_2N)_3P$ can be used as achiral derivatising reagents for the determination of enantiomeric excess (*ee*) of chiral alcohols R^*OH .



When R^*OH are racemic there appear two signals in the NMR ^{31}P spectra of reaction mixture (1) in ratio 1:1 about 80 ppm and three signals in reaction mixture (2) in ratio 1:2:1 about 140 ppm due to different manifestation of *d,l*- and *meso*-forms. When the enantiopure alcohols are used in these reactions the NMR spectra display the singlets of the derivatisation products. The integral intensity of signals in all spectra obtained and corresponding *ee* values of R^*OH satisfy to Horeau equilibrium [1].

References

- [1] J.P. Vigneron, M. Dhaenens, A. Horeau, *Tetrahedron*, **29**, 1055 (1973).