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3R-取代烷氧基奎宁环烷的立体、化学研究

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摘要 本文报道采用光学纯的3R-奎宁环醇与环氧化合物作用, 得到了其中两个纯的光学异构体3R-1和3R-2, 药理实验结果表明, 它们对大鼠大脑M胆碱受体亲合力差异显著, 为了确定它们的立体结构与生物活性间的关系, 本文采用NOE差谱和二维核磁共振等技术作了研究。

关键词 烷氧基 核磁共振谱法 二维 立体化学 立体结构 奎宁环 P 差谱

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Stereochemistry study of 3R-substituted alkoxyl-quinuclidine

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Abstract By using optically pure 3(R)-quinuclidinol, two diastereoisomers I and II of 3-(substituted) alkoxyl-quinuclidine were synthesized. 1H and 13C NMR spectra of I and II have been completely analyzed utilizing double-quantum filtered COSY, 13C-1H COSY and NOE difference experiment The NOE difference experiment is used to determine the absolute configuration at 11-C of the diastereomers. According to the results of NOE difference and variable concentration NME experiments, the configuration about 11-C of I is designated as S, whereas the configuration about 11-C of II is designated as R. The result was confirmed by X-ray diffraction anal.

Key words ALKOXYL GROUP NMR SPECTROMETRY TWO-DIMENSIONAL STEREOCHEMISTRY SPATIAL STRUCTURE QUINUCLIDINE P SUBTRACTION SPECTRA

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