

本期目录 | 下期目录 | 过刊浏览 | 高级检索

[打印本页] [关闭]

论文

N,N-二[二(3-甲氧基丙基)膦基乙基]-2-乙氧基乙胺盐酸盐的合成

楚进锋¹, 王学斌²

1. 北京化工大学化工资源有效利用国家重点实验室, 北京100029;
2. 北京师范大学放射性药物教育部重点实验室, 化学学院, 北京100875

摘要:

以2-乙氧基乙胺和3-氯-1-丙醇等为起始原料, 经7步反应, 制备了*N,N*-二[二(3-甲氧基丙基)膦基乙基]-2-乙氧基乙胺(PNP5)盐酸盐, 其中关键步骤是后两步. PNP5盐酸盐的结构和组成通过IR, ¹H NMR, ¹³C NMR, ³¹P NMR, MS和元素分析等方法确认.

关键词: *N,N*-二[二(3-甲氧基丙基)膦基乙基]-2-乙氧基乙胺盐酸盐; 叔膦配合物; 2-乙氧基乙胺; 3-氯-1-丙醇

Synthesis of Hydrochloride of Bis(dimethoxypropylphosphinoethyl)-ethoxyethylamine

CHU Jin-Feng^{1*}, WANG Xue-Bin²

1. State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, Beijing 100029, China;
2. Key Laboratory of Radiopharmaceuticals, Ministry of Education, College of Chemistry, Beijing Normal University, Beijing 100875, China

Abstract:

[^{99m}TcN(PNP5)(DTC)]⁺[PNP5: bis(dimethoxypropylphosphinoethyl)-ethoxyethylamine, DTC: dithiocarbamate] heterocomplexes can be viewed as resulting from the selective coupling of the metal fragment [^{99m}TcN(PNP5)]²⁺ with the bidentate dithiocarbamate *n*-donor ligand, and these complexes have attractive potential for myocardial perfusion imaging agents. In this article, PNP5 hydrochloride was synthesized from 2-ethoxyethylamine and 3-chloro-1-propanol through seven steps successively, in which the last two steps were the key. The structure of PNP5 hydrochloride was affirmed by IR, ¹H NMR, ¹³C NMR, ³¹P NMR, MS and Elemental analysis.

Keywords: Bis(dimethoxypropylphosphinoethyl)-ethoxyethylamine(PNP5) hydrochloride; Tertiary phosphine complex; 2-Ethoxyethylamine; 3-Chloro-1-propanol

收稿日期 2009-03-10 修回日期 网络版发布日期

DOI:

基金项目:

北京化工大学青年教师自然科学基金(批准号: QN0624)资助.

通讯作者: 楚进锋, 男, 博士, 讲师, 主要从事配位化学研究. E-mail: jfchu@163.com

作者简介:

参考文献:

- [1]Morassi R., Sacconi L.. J. Chem. Soc.A[J], 1971: 492—499
- [2]GONG Jun-Fang(龚军芳), LIU Guang-Yu(刘广宇), ZHU Yu(朱玉), et al.. Chem. J. Chinese Universities (高等学校化学学报)[J], 2006, 27(7): 1266—1271
- [3]Bolzati C., Uccelli L., Boschi A., et al.. Nucl. Med. Bio.[J], 2000, 27: 369—374
- [4]Boschi A., Bolzati C., Benini E., et al.. Bioconjugate Chem.[J], 2001, 12: 1035—1042
- [5]Bolzati C., Boschi A., Uccelli L., et al.. J. Am. Chem. Soc.[J], 2002, 124: 11468—11479
- [6]Duatti A., Bolzati C., Uccelli L., et al.. Radioactive Transition Metal Nitride Hetero-complex, Eur Patent: EP 0949265[P], 1999

扩展功能

本文信息

Supporting info

PDF(245KB)

[HTML全文]

[\({article.html_WenJianDaXiao} KB\)](#)

参考文献[PDF]

参考文献

服务与反馈

把本文推荐给朋友

加入我的书架

加入引用管理器

引用本文

Email Alert

文章反馈

浏览反馈信息

本文关键词相关文章

[N,N-二\[二\(3-甲氧基丙基\)膦基乙基\]-2-乙氧基乙胺盐酸盐; 叔膦配合物; 2-乙氧基乙胺; 3-氯-1-丙醇](#)

本文作者相关文章

PubMed

- [7]Bolzati C., Refosco F., Cagnolini A., et al.. Eur. J. Inorg. Chem.[J], 2004, (9): 1902—1913
- [8]Bolzati C., Boschi A., Uccelli L., et al..Nucl. Med. Commun.[J], 2002, 23(7): 689—693
- [9]Duatti A., Bolzati C., Uccelli L., et al.. Radiopharmaceutical for Diagnostic Imaging Containing a Technetium-99m Nitride Heterocomplex, International Patent: WO 02/09771[P], 2002
- [10]Boschi A., Uccelli L., Bolzati C., et al.. J. Nucl. Med.[J], 2003, 44(5): 806—814
- [11]Kim Y. S., He Z., Hsieh W., et al.. Bioconjugate Chem.[J], 2006, 17: 473—484
- [12]Bianchini C., Farnetti E., Glendenning L., et al.. Organometallics[J], 1995, 14: 1489—1502
- [13]Saalfrank R. W., Deutscher C., Sperner S., et al.. Inorg. Chem.[J], 2004, 43(14): 4372—4382
- [14]McEwen W. E., Janes A. B., Knapczyk J. W., et al.. J. Am. Chem. Soc.[J], 1978, 100(23): 7304—7311
- [15]Lebl T., Smicka A., Brus J., et al.. Eur. J. Inorg. Chem.[J], 2003: 143—148
- [16]Jansen A., Pitter S.. Monatshefte fur Chemie[J], 1999, 130: 783—794

本刊中的类似文章

文章评论

反馈人	<input type="text"/>	邮箱地址	<input type="text"/>
反馈标题	<input type="text"/>	验证码	<input type="text"/> 1588