

Full Papers

### Spectroscopic Study on Interaction of $\beta$ -Cyclodextrin with Triprolidine Hydrochloride

ALI Syed Mashhood\*, ASMAT Fahmeena

Department of Chemistry, Aligarh Muslim University, Aligarh, 202002, UP, India

收稿日期 2005-6-1 修回日期 2006-1-14 网络版发布日期 接受日期

**摘要** The complexation of triprolidine hydrochloride (TRP) and  $\beta$ -cyclodextrin ( $\beta$ -CD) in deuterium oxide was investigated by 400 MHz  $^1\text{H}$  NMR spectroscopy. The 800 MHz 2D ROESY data revealed that two 1: 1 and one 2: 1  $\beta$ -CD-TRP inclusion complexes were formed. Both aromatic moieties (*p*-tolyl and pyridyl ring) has entered into the  $\beta$ -CD cavity, confirming the existence of two different equilibria for 1: 1 inclusion complexes in which *p*-tolyl ring of the guest is more tightly held by the host cavity. The ROE intermolecular interactions provided the plausible structures of these 1: 1 and 2: 1 stoichiometric inclusion complexes of  $\beta$ -CD-triprolidine hydrochloride in solution.

**关键词** [host-guest complex](#)  [\$\beta\$ -cyclodextrin](#) [triprolidine hydrochloride](#)  [\$^1\text{H}\$  NMR](#) [ROESY](#)

分类号

### Spectroscopic Study on Interaction of $\beta$ -Cyclodextrin with Triprolidine Hydrochloride

ALI Syed Mashhood\*, ASMAT Fahmeena

Department of Chemistry, Aligarh Muslim University, Aligarh, 202002, UP, India

**Abstract** The complexation of triprolidine hydrochloride (TRP) and  $\beta$ -cyclodextrin ( $\beta$ -CD) in deuterium oxide was investigated by 400 MHz  $^1\text{H}$  NMR spectroscopy. The 800 MHz 2D ROESY data revealed that two 1: 1 and one 2: 1  $\beta$ -CD-TRP inclusion complexes were formed. Both aromatic moieties (*p*-tolyl and pyridyl ring) has entered into the  $\beta$ -CD cavity, confirming the existence of two different equilibria for 1: 1 inclusion complexes in which *p*-tolyl ring of the guest is more tightly held by the host cavity. The ROE intermolecular interactions provided the plausible structures of these 1: 1 and 2: 1 stoichiometric inclusion complexes of  $\beta$ -CD-triprolidine hydrochloride in solution.

**Key words** [host-guest complex](#)  [\$\beta\$ -cyclodextrin](#) [triprolidine hydrochloride](#)  [\$^1\text{H}\$  NMR](#) [ROESY](#)

DOI:

通讯作者 ALI Syed Mashhood [smashhoodali@yahoo.com](mailto:smashhoodali@yahoo.com)

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF\(0KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [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](#)

▶ [复制索引](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ [本刊中 包含“host-guest complex”的相关文章](#)

▶ 本文作者相关文章

· [ALI Syed Mashhood](#)

· [ASMAT Fahmeena](#)