

光谱法研究Ge-132与DNA的作用机理

李文友,朱守田,何锡文,梁宏

南开大学化学系;广西师范大学化学与生命科学学院

收稿日期 修回日期 网络版发布日期 接受日期

摘要 利用吸收光谱、DNA碱变性曲线、荧光光谱研究了Ge-132与DNA的相互作用。在Ge-132存在下,DNA的紫外吸收光谱产生明显的减色效应。同时,Ge-132的存在使DNA碱变性的pH值增大,变性后增色效应减小,实验结果表明,Ge-132主要是以嵌入方式与DNA结合的。

关键词 [吸收光谱法](#) [脱氧核糖核酸](#) [有机锗化合物](#) [嵌入反应](#) [抗癌药](#) [药物设计](#)

分类号 [Q52](#)

Study on the interaction mechanism between Ge-132 and DNA by spectral methods

LI WENYOU,ZHU SHOUTIAN,HE XIWEN,LIANG HONG

Abstract The interaction between Ge-132 and DNA was investigated using absorption spectra, DNA alkaline denaturation and fluorescence spectra. Based on the measurements of A_{260}/A_{280} in different pH media, the alkaline denaturation curves of CT DNA in the absence of and in the presence of Ge-132 were obtained. The results showed that the alkaline denaturation for Ge-132-DNA complex occurred at a higher pH than for DNA alone and the hyperchromicity of Ge-132-DNA complex was smaller than that of DNA, which suggested the intercalation mechanism of Ge-132 into DNA bases. All the experimental results indicated that the intercalative binding was the major mode for the interaction of Ge-132 with DNA.

Key words [ABSORPTION SPECTROMETRY](#) [DEOXYRIBONUCLEIC ACID](#) [ORGANO GERMANIUM](#) [INTERCALATION REACTION](#) [ANTICARCINOGEN](#)

DOI:

通讯作者

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“吸收光谱法”的
相关文章](#)

▶ 本文作者相关文章

- [李文友](#)
- [朱守田](#)
- [何锡文](#)
- [梁宏](#)