

研究论文

苏木素与DNA相互作用的光谱研究

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摘要 以吖啶橙(AO)作探针研究了苏木素(HE)与DNA的相互作用. 吸收光谱和荧光光谱研究表明, 苏木素与DNA发生作用生成了复合物. 其结合比 $n_{\text{HE}}: n_{\text{DNA}}=3: 1$, 22 °C时苏木素与DNA的结合常数 $K=5.96 \times 10^4$ L/mol. 同时研究了酸度、盐效应和温度等对苏木素与DNA相互作用的影响以及它们之间的作用方式, 确定了苏木素与鲑鱼精DNA之间为混合作用方式.

关键词 [苏木素](#) [吖啶橙](#) [DNA](#) [作用方式](#)

分类号

Study on the Interaction between Hematoxylin and DNA by Spectrometry

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Abstract The interaction of hematoxylin (HE) with DNA was studied by using acridine orange (AO) as a probe. The results indicated that there was a complex of hematoxylin and DNA, which has been confirmed by absorption, fluorescence spectra and viscometry. The binary complex ratio of $n_{\text{HE}}: n_{\text{DNA}}=3: 1$, the binding constant of HE interacting with DNA is 5.96×10^4 L/mol. At the same time, the influence of acidity, salt effect and temperature on the interaction of hematoxylin with DNA was studied. The results suggested that the intercalation and electrostatic binding should be the two major modes for interaction between hematoxylin and herring sperm DNA.

Key words [hematoxylin](#) [acridine orange](#) [DNA](#) [action mode](#)

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