

Hydrolysis of DNA by a Dipeptides Containing Histidine

Abstract

Three ligands which contain histidine and conjugated by a flexible linker, have been characterized and evaluated as DNA cleavage agents. The cleavage activity of metal complexes were evaluated by monitoring the conversion of supercoiled plasmid DNA (pUC19) (Form I) to nicked circular DNA (Form II) by agarose gel electrophoresis. The results showed that the cleavage activity of Cu(II) complexes was enhanced compared with histidine. Specially, at a high reaction concentration (0.2 mM), Cu(II) complexes can cleave the plasmid DNA with some selectivity.