Abstract This study comprises the synthesis of new p-tert-butylcalix[4]arene with different amide functional groups and summarises an investigation of their DNA cleavage activities. The structural investigations of the synthesised compounds were examined by FTIR, H-1 NMR, C-13 NMR, elemental analysis and FAB-MS techniques. The interaction between these compounds and pBR322 plasmid DNA has been investigated via agarose gel electrophoresis and, according to the results, compounds 5, 7, 8 and 13 exhibit efficient DNA cleavage activity. In the electrophoresis images of 5, 7 and 8, Form IV which is small DNA fragment was observed in addition to supercoiled Form I, open circular Form II and linear Form III. Keywords Author
Keywords: calix[4]arene; DNA cleavage; amide; plasmid DNA KeyWords Plus: LARGE CALIXARENE DIMERS; RECOGNITION; EXTRACTION; COMPLEXATION; BINDING Author Information Reprint Address: Yilmaz, A (reprint author)