**ABSTRACT**

Copolymers of N-cyclohexylacrylamide (NCA) and 2,4-Dichlorophenyl methacrylate (DCPMA) were synthesized by the free radical polymerization using 2,2′-azobisisobutyronitrile (AIBN) as initiator. The copolymers were characterized by 1H-NMR spectroscopy and the copolymer compositions were determined by 1H-NMR analysis. The reactivity ratios of monomers were determined using linear methods like Fineman-Ross (r1 = 0.38 and r2 = 1.07) and Kelen-Tudos (r1 = 0.38 and r2 = 1.08). The value r1. r2 = 0.4 showed that DCPMA is more reactive than NCA. Hence the copolymers contain a higher proportion of DCPMA units. Mean sequence lengths of copolymers were estimated from r1 and r2 values. It showed that the DCPMA units increases in a linear fashion in the polymer chain as the concentration of DCPMA increases in the monomer feed. The copolymers were tested for their antimicrobial properties against selected microorganisms