**ABSTRACT**

A novel acrylic monomer Quinolinylacrylate (QA) was synthesized by esterification of 8-Hydroxy quinoline and Acryloyl chloride. The monomer (QA) was characterized by Fourier transform infrared spectroscopy (FT-IR). Copolymers of N-tert-butylacrylamide (NTB) with Quinolinylacrylate (QA) at different feed composition was prepared by free radical polymerization at 60°C using 2,2’-azobisisobutyronitrile (AIBN) as an initiator and methanol/water (3:1) as a solvent. The copolymers compositions were characterized using 1H-NMR data. The monomer reactivity ratios were determined by the application of linearization methods such as Fineman-Ross (r1=8.0, r2= 0.60), Kelen-Tudos (r1= 8.0 , r2= 0.61) . Mean sequence lengths of copolymers were estimated from r1 and r2 values. Antimicrobial activity of the copolymers was also investigated against various microorganisms like bacteria (Escherichia coli , Pseudomonas aeruginosa and Klebsiella pneumoniae), fungi (Aspergillus flavus ,Candida albicans and Cryptococcus ) . The activity of copolymers against bacteria and Fungi increases with increasing mole % of QA content.