CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

In the free radical melt grafting of MAH onto HDPE and PP in the presence of dicumyl peroxide (DCP) in a co-rotating twin screw extruder, the reactant concentration; MAH and DCP, played a major role in the determination of the grafting degree (GD). The maximum GD of HDPE at 2.44 % was obtained by the application of 4 phr of MAH and 0.125 phr of DCP and the maximum GD of PP at 2.67 % was obtained by the application of 5 phr of MAH and 0.3 phr of DCP. The rheological properties, MFI, melting temperatures (T_m) and percent crystallinity of grafted materials depend on amount of reactants. The grafting degree was confirmed using FT-IR spectroscopy, it was found the bands of carbonyl (C=O) of saturated maleic anhydride that demonstrates successful grafting.