

## CHAPTER V

### CONCLUSIONS

Results of the study showed that the ethylene-methacrylic acid copolymer partially neutralized with sodium (Na-EMAA) was effective when use as a compatibilizer for blends of LDPE with PA6. The improvement of morphology and mechanical properties of the resulting blends were observed. From the SEM micrographs showed that the average size of the dispersed phase decreased significantly by the addition of small amount of Na-EMAA. Only 0.5 wt % of Na-EMAA was sufficient to produce the maximum reduction in dispersed phase size. The average dispersed phase size in the compatibilized blend ranged between 2 and 5  $\mu\text{m}$ . These observations could be due to the strong interaction between PA6 and Na-EMAA which reduced the interfacial tension between two phases. The mechanical properties increased with the addition of a small amount of compatibilizer. These phenomena were more pronounced at 80/20 PA6/LDPE with 0.5 wt % of Na-EMAA.