

CHAPTER XII

CONCLUSION

Uncompatibilized PC/PLA blends were mixed by twin screw extruder at 210-240 °C and screw speed of 25 rpm. PC70 has the highest mechanical properties such as tensile strength and flexural strength in the all ratio of the PC/PLA blends suggesting PC70 is the optimum composition to do further emperiment. Adding 0.5 phr PS-g-GMA into PC70 is the best type and amount because PC70G0.5 has high tensile strength and accepted Young's modulus. By flexural properties, PC70G0.5 has higher flexural propertes compared to other formulas. By impact strength, PC70G0.5 has high impact strength similar to neat PC. HDT of PC70G0.5 was higher than other formulas closed to neat PC. After QUV test, the tensile and flexural properties of all formulas were dropped. The impact strength of PC70G0.5 insignificantly dropped after QUV test. Finally, Benchmarking with previous work and commercially available PC/PLA blend exhibit that PC70G0.5 provided excellent mechanical properties as same as commercially available product. HDT of PC70G0.5 was higher than those of the previous work and commercially available product suggesting that this material is capable for automotive and mobile device applications.