

## CHAPTER V

### CONCLUSIONS AND SUGGESTIONS FOR FURTHER STUDY

Chlorinated natural rubber and chlorinated pre-vulcanized rubber can form flat and slippery films at very low levels of chlorination, whereas non-chlorinated rubbers form sticky films. Surface and cross-section of films from uncompounded chlorinated natural rubber and chlorinated pre-vulcanized rubber latex have some cracks, but those from non-chlorinated rubbers have more cracks distributed on the surface. Non-chlorinated and chlorinated polychloroprene films have inferior film forming property. The films were easily torn and easily cracked.

Chlorinated natural rubber and chlorinated pre-vulcanized rubber are soluble in hydrocarbon solvents, chlorinated carbon and ester, but not in alcohol. Chlorinated polychloroprene rubber cannot dissolve in any solvents, just swell. Chemical resistance of chlorinated rubbers is significantly improved especially, when chlorine content increase. This implies that chemical resistance depends on chlorine content. Ozone resistance and thermal stability of chlorinated rubbers and non-chlorinated rubbers were not changed, because of low chlorine content.

#### Suggestions of further study

1. Preparation of chlorinated rubbers with high chlorine content using alternative method of chlorine generation.
2. Properties of partially chlorination of other commercially available synthetic rubber latexes.
3. The effect of compounding on cast films should be determined.
4. Studies of the feasibility to prepare "powder free" NR gloves from partially chlorinated natural rubber latexes.