CHAPTER VI

CONCLUSION

From this research work, the following conclusion can be drawn.

1. Geranylgeranyl-18-hydroxylase enzyme was found in the 20,000 *g* microsomal fraction of *Croton sublyratus* Kurz. leaves. It catalyzed at least the C-18 hydroxylation of geranylgeraniol to the product which was determined by spectroscopic data as plaunotol.

2. The formation of plaunotol was correlated with incubation time and the amount of microsomal protein and was, therefore, the enzymatic reaction.

3. The activity of geranylgeraniol-18-hydroxylase enzyme in 20,000 *g* microsomal fraction could be increased by boiling the microsomal fraction at 100°C for 30 min using 0.1 M NADPH as external electron donor. Its pH optimum was 5.0.

4. The physical structure of the boiled microsomal fraction, which was observed by electron microscope, showed particles with the diameter ranging from 20 to 60 nm.

5. The microsomal fraction of *C. sublyrayus* Kurz. could be used as an enzyme further study on the structure and properties of GGOH-18-hydroxylase and potentially for biotechnological applications.