

CHAPTER 5

CONCLUSIONS

From the study on polysaccharides from leaves of Thai local plant, Moo-noi, all results can be concluded as follows;

1. Water extracted polysaccharide from Moo-noi was obtained with the total sugar yield of 22.35% from dried Moo-noi leaves and the average DP was 21, approximately.

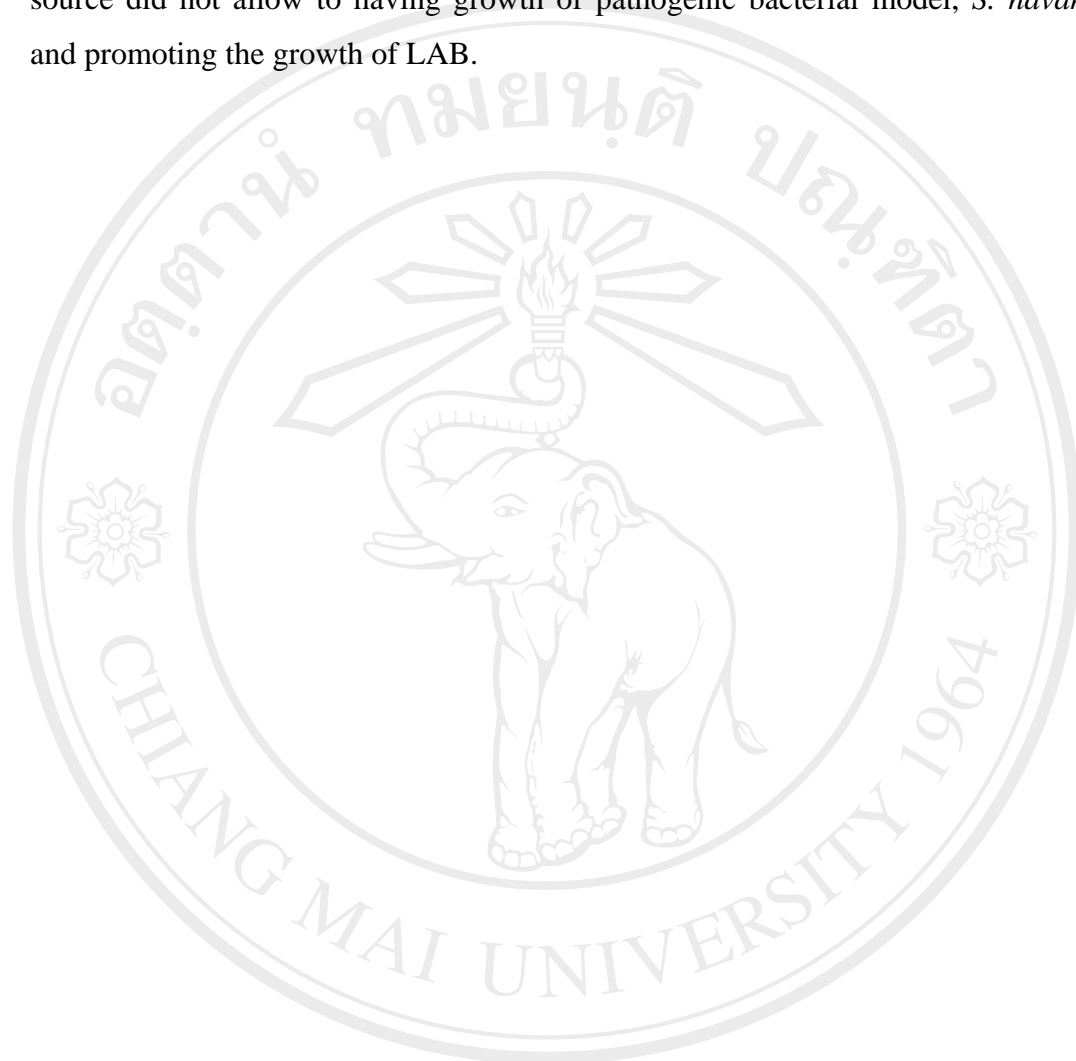
2. Most of the polysaccharide obtained from water extraction was assumed to be pectin according to 85% yield of uronic acid, a general monomer found in pectin polysaccharides.

3. The suitable condition for the enzymatic hydrolysis of pectin from Moo-noi leave is using 10 units of pectinase reacted with 100 ml of 0.2 % (w/v) crude pectin solution and incubation at 37°C for 30 min. The pectic oligosaccharide obtained was DP~8, approximately. The prolong incubation time to 2 hours generated the pectic oligosaccharide DP~4.

4. Study on prebiotic properties of pectin and POS in pure culture was found that LAB including LAB33, LABG12 and *Ent. faecium* displayed the higher growth on POS as a carbon source than in pectin containing basal medium. However, most of lactic bacteria tested could be growth well in glucose medium.

5. *In vitro* study of prebiotic property in mixed cultures of 3 lactic bacterial strains with *E. coli* and *S. havana* found that most of the LAB grew better on the pectic oligosaccharides than the extractable pectins.

6. The result from fecal slurry experiment indicated that POS was possible to be used as prebiotic especially for lactic bacteria strain LABG12 as this carbon source did not allow to having growth of pathogenic bacterial model, *S. havana* and promoting the growth of LAB.



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