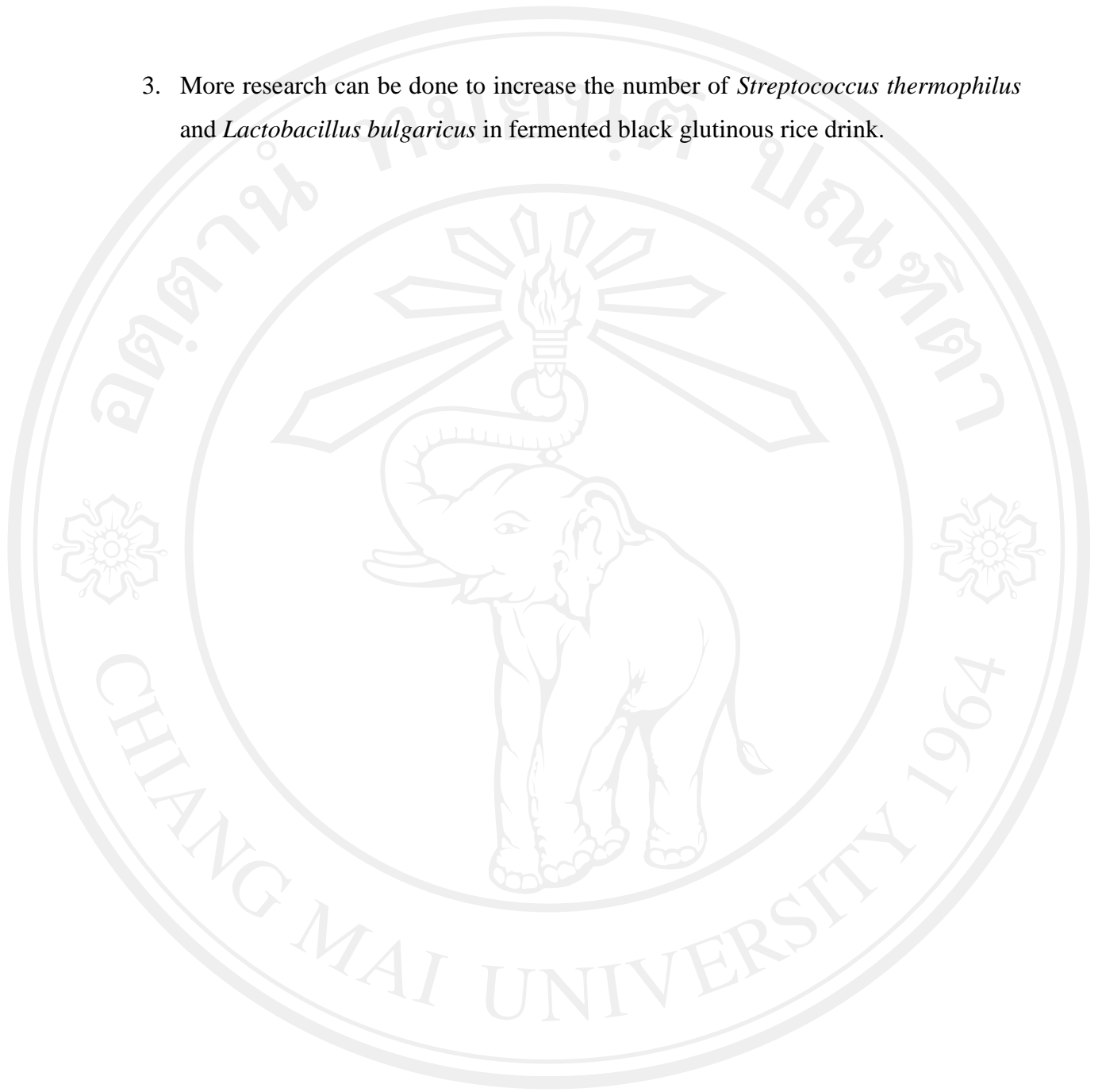# CHAPTER 5

CONCLUSION AND RECOMMENDATION

This research was focused to understand the preparation and processing of black glutinous rice grains to produce rice solution that contained high amount of total sugar, reducing sugar and antioxidant components. From the results of the study, it showed that rice particles that passed 70 screen mesh (a size of 210 μm) should be soaked in distilled water using a ratio of 1:5 for the rice and water, respectively, at 4°C for 30 min and, subsequently, boiled in the distilled water for another 30 min to produce the required properties of the rice solution.

In the production of the fermented black glutinous rice drink, lower pH values of the product significantly produced higher total sugar, reducing sugar, total soluble solids and antioxidant components, including phenolic and anthocyanin contents. Lower pH of the fermented rice drink also supported higher numbers of the starter cultures.

Recommendation

1. This research did not greatly utilize the rice starch in the black glutinous rice since the final product of this study was fermented black glutinous rice drink. However, more utilization of the rice starch in the raw material can be beneficial to produce other fermented rice products that were similar to set and stirred yogurts. An optimum rice particle size, soaking condition and heating process can be investigated to make more diversification of fermented black glutinous rice products.

2. Although this research had shown that the fermented black glutinous rice drink could be manufactured by normal yogurt cultures, the sensorial characteristics of the fermented rice drink has not been studied in a great detail. Further research in the area can be helpful in producing a fermented rice drink that has a good consumer acceptability.

3. More research can be done to increase the number of *Streptococcus thermophilus* and *Lactobacillus bulgaricus* in fermented black glutinous rice drink.