CHAPTER 5
CONCLUSION AND RECOMMENDATION

5.1 Conclusion

From data of this study, it could be concluded that a soaking water ratio of 1:5 for rice and water, respectively, with a soaking time of 2 h produced a moderate amount of total sugar, reducing sugar, phenolic, anthocyanin and phytic acid contents in the black glutinous rice milk. The yield of the rice milk at this ratio was higher than the lowest soaking ratio of 1:2.5. The optimum conditions of α-amylase and amyloglucosidase extraction to produce the black glutinous rice milk with high reducing sugars and antioxidant components were at 90ºC for 30 min and at 60ºC for 360 min, respectively.

Fermented rice could be produced by the supplementation of 0.02% (w/v) starter cultures in the black glutinous rice milk. An extra addition of full fat milk powder significantly increased viscosity, L* value, b* value, total sugar and total soluble solid of the final fermented rice. Starter cultures of *S. thermophilus* and *L. bulgaricus* would grow better in the presence of full fat milk powder.

5.2 Recommendation

1. More works regarding antioxidant compounds in black glutinous rice milk by high performance liquid chromatography and gas chromatography mass spectrophotometer should be carried out to specifically identify and determine the types of antioxidants in the milk.
2. Due to a high price of enzymes, alternative processing methods to produce black glutinous rice milk with high reducing sugar and antioxidant compounds should be carried out.

3. There is a demand to have a better understanding about the growth of starter cultures in the black glutinous rice milk.
4. The fermented black glutinous rice should have a sensory evaluation to assess its acceptance by the general public.