CHAPTER V

CONCLUSION AND RECOMMENDATIONS

This research consisted of two parts: the first was the determination of the gluten contents of four commercial brands of high gluten flour. This was to investigate the flour samples that have the highest gluten content. Secondly, study on the physicochemical properties and sensory evaluation of bread produced. All flour samples were significantly different in term of gluten content and flour sample C had the highest amount of gluten.

The data for the gluten contents indicated that they were highly heterogeneous. The results showed that there were significant differences among all bread samples in term of texture. The colour analysis observed that there were no significant differences among all bread samples in "b" values; bread C had the highest "a" value and "L" value. The highest value of weight to height ratio was obtained from bread D. For proximate composition which were moisture, ash content, crude protein, and crude fibre. The results of ash had no significant different among all the bread samples, and the same in moisture content except bread C. Bread sample C had the highest levels of protein content, fibre content, carbohydrate and energy values.

Sensory analysis was done to assess bread qualities. For the sensory attributes, the bread samples did not differ significantly for dryness attribute; bread B and bread D had the highest scores in crust colour, taste, aroma, appearance and overall acceptability. From this research, the gluten content was an important factor which affected on the physicochemical analysis investigated and sensory evaluation. It can

be conclude that bread C was found to have higher nutritional content (have the highest protein, fibre content, carbohydrate and energy value). However, the scores for organoleptic attributes like crust colour, taste, aroma and appearance, except hardness and dryness attributes were generally accepted to the bread D followed by bread B. Therefore, bread sample D had the best overall acceptability scores among the bread samples.

It can be recommended that vital wheat gluten is now a significant ingredient in the food industry and an important item of world trade. Bread produced from high gluten can be recommended for consumers and can be considered as functional foods. These breads contain fibres and other nutrients that offer additional health benefits. This study has been investigated on the quality of bread produced using different commercial brands of high gluten flour, but it should be a room for improvement in the future. Therefore there is the need to investigate on the rheological properties of the dough and mineral composition of bread. Besides that future study should be done to assess gluten protein types.