

**THE EFFECT OF DIFFERENT TYPES OF FLOUR ON YELLOW
ALKALINE NOODLE QUALITY: SENSORY AND TEXTURE**



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ABSTRACT

THE EFFECT OF DIFFERENT TYPES OF FLOUR ON YELLOW ALKALINE NOODLE QUALITY: SENSORY AND TEXTURE

The effect of different types of flour on yellow alkaline noodle was investigated in terms of sensory and texture. The analysis of noodle cooking quality and sensory evaluation were conducted to represent the sensory acceptability while the use of texture profile analysis (TPA) to represent the physical analysis. pH of each noodle was also determined as the noodle must fall within the range of alkaline condition. This study was conducted since there were little researches being done to the incorporation of lentil flour for yellow alkaline noodle especially in Malaysia market. Moreover, the buckwheat flour used is not common to Malaysian food industry even though it resembles the properties of wheat flour. The significances of this study are to obtain the effect of partial replacement for each type of flour to noodle for the purpose of large scale production. Noodle samples were done using different level of addition, namely 30%, 40% and 50% level of flour. 30 trained panelists were used during the hedonic scale rating to look for the overall acceptability of all samples. Then, the best three samples from each type of flour further evaluated for quantitative descriptive analysis (QDA) to look for in depth characteristics of noodles. This study showed that the highest percentage of flour that can be incorporated and the relationship to noodle properties. There were also a close relationship between noodle colour, cooking characteristics (namely, optimum cooking time, solid loss and water uptake) and texture profile analysis. This study also revealed that the 40% level of chickpea flour added giving the optimum score among all samples given by the panellists and other tests conducted.

CHAPTER 1

INTRODUCTION

1.1 Background and problems statement

One of the most distinguished oriental cultures is the consumption of rice, and noodles as daily staple food. Noodles are an important diet in many countries of eastern and south eastern Asia, accounting for approximately one third of Australia wheat and about 40% of wheat consumed in Asian countries (Huo and Kruk, 1998). A noodle is made from unleavened dough that has been shaped into thin flat strips or round cylinders and cooked in a boiling liquid. Asian noodles differ from the Italian pasta in raw materials and processing methods. Noodle products are usually made from common fine wheat flour by a process of sheeting and cutting as on the other hand, pasta products is being processed from coarse semolina milled from durum wheat by extrusion.

The inventions of of many noodle formulations and processing techniques by the Chinese, coupled with the advanced technology by the Japanese, have made the noodles an international product. Despite the ancient origins, noodles have undergone evolution and migration, as the product increasingly becoming globalized. The modifications of formulations and processing are necessary due to