EFFECTS OF DIFFERENT CONCENTRATION OF AMYLASES ON THE STALING OF PAROTTA AT DIFFERENT STORAGE PERIOD

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ABSTRACT

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Staling is a complex phenomenon that occurs in starch based product like parotta that uses wheat flour as the main ingredients. There are many characteristic that can be seen in stale product where product appear dry, harsh and not acceptable as fresh anymore when kept at room temperature for a few day. The summarization that can be made is that when the parotta producer decides to kept the parotta at different storage time so the enzyme concentration use also must differ to make sure that the parotta can retain their best quality that required by the consumer even though it was stored for sometime. If producer decide to keep the parotta for at one day they are advice to use 150ppm amylase, then if they want to keep the parotta for two and three day they can use 200ppm amylase then if they want to store the parotta up to four day they can use 250ppm amylase. Each of this enzyme give significant effects at 5% level ($P<0.05$) on decreasing the enthalpy gelatinization and firmness value of parotta depending on different day of storage. In food industry sometime product would need a longer time to reach the consumer for example during long transportation process for exporting purpose. So it is very important to have an effective measure like the use of enzyme amylase in parotta to retain the quality of product as good as possible to ensure customer satisfaction. In this thesis the amylase enzyme effectiveness have been successfully proven to act as anti staling agent

CHAPTER 1

INTRODUCTION

1.1 Background

These days parotta or '*roti canai*' is an all-time favorite appetizer or meal among Malaysians. Originated from India, this food is usually eaten with chicken curry and dhal. Today in Malaysia, there are many variations of roti canai such as "Roti Biasa", Roti Bom", "Roti Tisu", "Roti Planta" and many more. In English, '*roti canai*' is sometimes referred to as "flying bread," a term that described the process of tossing and spinning by which it is made (Qarooni, 1996).

Parotta is a type of flat bread that is made from unleavened dough and baked in flat, often round loaves. This popular traditional flat bread product is composed of dough containing measured amounts of wheat flour, salt, water and oil, while sugar and egg form the optional ingredients. The entire ingredients is kneaded thoroughly, flattened, oiled and folded repeatedly. It is then allowed to rest, and the process is repeated. The final round of preparation consists of flattening the dough ball, coating it with oil and then cooking on a flat iron pan with a lot of oil. The best quality of parotta is deliciously light, crisp, round or square in shape, fluffy on the inside but