# PRODUCTION OF HIGH FIBRE BISCUIT FROM OIL PALM PERICARP FIBRE

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## TABLE OF CONTENTS

## ABSTRACT

## PRODUCTION OF HIGH FIBRE BISCUIT FROM OIL PALM PERICARP FIBRE

The oil palm pericarp fibre may provide potential alternative source of revenue for oil palm industries and the abundance of this raw materials lead to this study of incorporated it into the production of high fibre biscuit. The aims of this study were to evaluate the feasibility of producing high fibre biscuit from oil palm pericarp fibre that leads to an acceptable consumption. Toxicological analysis of BSLA was performed onto the raw material of oil palm pericarp fibre and also the finished product to determine the level of toxicant in different concentration was the major concern. In addition, the heavy metals were detected by using Atomic Absorption Spectrometry (AAS). Several other methods were used in these studies which was sensory evaluation, and also physical and chemical analysis. Physical analysis was to determine the fibre content in finished product through chemical analysis in order to obtain the high fibre claim on finished product. Statistical Package for the Social Sciences (SPSS) was used to analyze the sample by one way ANOVA and Duncan's to evaluate the significant different between formulations. In addition, the oil palm fibre can be incorporated into production of high fibre biscuit which was safe to be consuming with an improvement in the biscuit for better acceptability by the consumers.

# CHAPTER 1

# INTRODUCTION

## 1.1 Background and problem statement

Malaysia is the major producer of palm oil in the world. It produces 8.5 million tonnes per year of palm oil from fresh fruit bunches. Sabah's has the highest yield of oil palm fresh fruit bunch per hectare. Palm oil production generates large amounts of process residues such as fibre, shell and empty fruit bunches (EFB). In general, the fresh fruit bunch (FFB) contains (by weight) about 21% palm oil, 6–7% palm kernel, 14–15% fibre, 6–7% shell and 23% FFB.

Research into the utilization of oil palm empty fruit bunches has been active since 1954. Pulp suitable for certain paper products can be successfully produced. Utilization of EFB appears to be commercially and technologically feasible. It may also be highly desirable environmentally because it relieves the environmental impact of EFB, which is viewed as waste from the current oil production industry.

Almost 90% of the world palm oil production is used as food. This shows that the nutritional properties of palm oil and its fractions be adequately demonstrated. Oil palm fibers contain significant amounts of both water-soluble