

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF A PROTOTYPE
SEMI – AUTONOMOUS FOOD
VACUUM SEALER**

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ABSTRACT

Nowadays, people like to store their foods in refrigerator or maybe put it under the food cover. All food has their own expiry date and we need to be careful before taking our food. From there, they invented a vacuum seal machine for them to vacuum all oxygen out of their packaging and seal up the packaging so that no oxygen will get in. The purpose of this method is to protect food from dehydration and freezer burn. As mold and bacteria cannot grow without oxygen, so the expiry date provided can be extend. This project will make our production rate become faster by adding a conveyor to the machine so the process will always ongoing. This project will be more focusing on small industries such as people that run their business at their own home because they can't or doesn't have any space to make their own workspace. My objective for this project is to design an ergonomic machine for small industries and people that makes small business at their own home and to fabricate a low-cost and medium size machine for Small Medium Enterprise (SME).

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Fresh food is the condition of the food which has not been preserved and has not spoiled yet. For vegetables and fruits, this means that they have been recently harvested and treated properly postharvest. For meat, it has recently been slaughtered and butchered while for fish, it has been recently caught or harvested and kept cold. Dairy products are perishable and deteriorate easily. Fresh cheese, on the other hand is cheese that has not been dried or salted for age. Sour cream may be considered as fresh. Fresh food has not been dried, smoked, salted, frozen, canned, pickled or otherwise preserved.

Nowadays, there were many ways to keep your food fresh and good condition for a longer time from their provided expiry date. As one of the ways is using food vacuum sealer. Vacuum sealing is one of the recent technological innovations that have taken the food processing industry by storm. This sealing technique is currently considered to be one of the most beneficial ways to store or preserve any food item [1]. Vacuum sealers are available in the market in many different varieties. The latest machines come with highly useful functions such as air return, sealing and vacuum marinating [4]. Many types of food vacuum sealer in the market right now. But, not most of them are affordable and ergonomic. These sealers are easy to use and can be installed seamlessly into any modern- day industrial kitchen.

Eating fresh are really recommended because it produce actually loses its nutritional value over time, so the quicker it's eaten, the more nutrients that can be gained from it. Buying and eating freshly grown fruits and vegetables is the greatest approach to assure that your food contains no preservatives, chemicals or dyes. It is very important for us to take care of our health.