

UNIVERSITI TEKNOLOGI MARA

**DESIGN AND FABRICATION OF
AUTOMATIC FLOUR SIEVE**

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ABSTRACT

Automatic flour sieving is a valuable innovation for the bakery and food processing industry, as it can improve the efficiency and consistency of flour sifting. Traditional manual sieving methods are time-consuming and labor-intensive, and may result in inconsistent flour particle sizes. In contrast, automatic flour sieving utilizes mechanical sifting principles and modern technology to uniformly sift flour with minimal human intervention. This proposal outlines the design and development of an automatic flour sieving machine that can accurately and consistently sift flour to meet specific particle size requirements. The machine will be user-friendly, easy to operate, and require minimal maintenance. It will also be able to handle a wide range of flour types and particle size requirements, making it a versatile tool for the bakery and food processing industry.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Most of the things that we come across in our day-to-day life exist as a mixture of two or more pure substances. We need to separate these pure substances from the mixture in order to use them individually. For example, you must have noticed that we don't use the flour bought from the vendors directly for bake a cake[1]. We use certain separation techniques in order to separate the flour from the impurities attached to it.

We generally use sieve plates for the separation of flour from the bran particles or other impurities. These sieve plates allow the fine flour particles to pass through the holes of the sieve plate while the bigger impurities are unable to pass through it and remain on the sieve. This method of separation of particles from a mixture based on the difference in size of particles is known as sieving. It uses sieve plates for separation of coarse particles from finer particles.

This project about development of Automatic Flour Sieve. The machine using a dc motor to make the machine vibrate and just put the flour in the machine. This project is safe to use it does not use much manpower, did not required lot of electricity and very efficient to make the machine functionally on time. The machine have the dc motor that connected to unsymmetric steel and that make the motor vibrate the whole machine. Also, have spring at the legs of machine to reduce vibration on the table surface.

As we know, in Malaysia big factory as Gardenia have their own flour sieving machine that is big and not portable[2]. In this project the machine will be a portable and can be used for homemade used. Other than that, it also can fit in tiny place in the kitchen and easy to carry.