

UNIVERSITI TEKNOLOGI MARA

**DESIGN, ANALYSIS AND
FABRICATION
PORTABLE WASHING MACHINE**

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ABSTRACT

Washing machine is an invention that has existed in many years to help people to wash their clothes in the simplest way other than washing clothes by hand which can be tiring. However, some washing machines can be expensive and not suitable to bring along anywhere. Therefore, people invented mini washing machines or portable washing machines to make it needed when possible. Portable washing machines work the same as a normal washing machine, but the difference is they are much smaller in size which allows them to be brought along anywhere and are more affordable to a lot of people. This project is to design a portable washing machine that will function manually, be small, affordable, and lightweight so that it can be easy to bring along anywhere needed. Otherwise, it can be an eco-friendly portable washing machine that can help a lot of people in so many ways.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Washing our clothes is a common household chore that everyone does on the daily life. People used to wash their clothes manually that is by washing their clothes in a bucket and using their hand or a brush to scrub the clothes. Nowadays in a modern world, washing machine was invented to help people to wash clothes more easily and effortless. Washing clothes is such an important in daily life to maintain a healthy and clean life, that means everyone always need to wash their clothes when away from home like on a road trip or vacation.

It is impossible to bring a huge and heavy washing machine to a road trip. People could bring a bucket and bush to wash their clothes although it will be very time consuming and takes time off the vacation. Other than that, watching clothes will be very tiring after a long day of the road trip. Due to all these problems, this device is being invented. The aim of this invention is people can wash clothes anywhere they go and help to reduce their time to wash their clothes. This machine will use mostly plastic for its outer part to make it easier and lighter to bring it everywhere and some of the components inside the machine will be aluminum to make the device function smoothly. The result of this machine to let people wash their clothes anywhere they go, reduce the time and less energy needed to wash their clothes.

1.2 Problem Statement

After travelling or going out in a long period of time, their clothes will be dirty and smelly. Also, maybe bacteria can attach to the clothes and washing the clothes is the best choice. Keeping the clothes clean and perhaps want to use the same clothes again if people did not bring enough clothes for the trip. It will be really tiring to wash the clothes by hand and must dry it by hand by twisting it, since after spending the whole day travelling. There is a high possibility that there will not be any washing machine the place that they stay and such a waste of money to spend on public laundry if only needed to wash small quantity of clothes. Other than that, washing small amount of