

**UNIVERSITI TEKNOLOGI MARA**

**DESIGN AND FABRICATION OF  
EGG WASHING MACHINE**

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## **ABSTRACT**

Chicken and other egg laying creatures are kept widely throughout the world and mass production of chicken eggs is a global industry. During production, eggs are usually candied to check their quality. Some restaurant businesses still wash eggs using the old method which is by washing the eggs individually using a sponge. The main problem with this method is that it is time-consuming and the quantity of eggs that can be washed per day is not in mass. The eggs will be cleaned inconsistently because manpower is not as efficient as a machine. Therefore, the aim of this project is to design and fabricate an egg washing machine at an affordable price. This idea is developed in the hope of cleaning eggs without using a lot of manpower, but economical as well.

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# CHAPTER ONE

## INTRODUCTION

### 1.0 Background of Study

Chicken Egg production in Malaysia exceeds the annual SSL goal of over 12 billion kernels in 2021 and continues to increase every year. In that regard, the amount of egg consumption by Malaysians is as much as 295 a year, which is a very high level among countries in Asia [1]. The supply expenditure budget for chicken eggs is over 1 billion eggs a month. Based on the data, the production of chicken eggs is sufficient to accommodate the needs and also the demand of users. This is because eggs are used in various recipes from fried eggs, kuih mueh, traditional dishes, bread, roti canai, biskut and various other foods and products [1].

Eggshells that are not washed are feared to have salmonella bacteria. Salmonella bacteria typically live in animal intestines and are shed through stool (feces). Humans become infected most frequently through contaminated water or food [2]. Unwashed eggs used to cook roti jala were the cause of food poisoning among teachers and students of Tapah Science Secondary School. The public health lab found that the roti jala was contaminated with three bacteria, namely Salmonella, Bacillus Cereus and E.coli [3]. To avoid food poisoning caused by these bacteria, users are advised to wash chicken eggs thoroughly before use as they may be contaminated with Salmonella enteritidis bacteria.

In Malaysia, most restaurant take for granted to clean the eggs. Some restaurant even used the eggs that were still in their nests and full of dried chicken uncleanliness to make the meals [4]. This action may result food poisoning to the people that ate the meal. The most widely used method to clean eggs is the conventional way that uses manpower to clean and scrub the chicken uncleanliness one by one. Maybe this is the reason why most restaurant take for granted to clean the eggs. They might think that cleaning eggs one by one is a waste of time and a troublesome job to do. The used of