UNIVERSITI TEKNOLOGI MARA

AUTOMATIC SENSOR ONION SLICER

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ABSTRACT

An automated onion-slicing machine made just for onions is called the automatic onion slicer pusher. It has a device that slices onions into uniform pieces by forcing them through a series of sharp blades. By streamlining the onion-slicing procedure, the gadget hopes to save users' time and effort. The onion is pushed forward towards the blades by a motor-driven part of the slicer's pusher mechanism. Because of the way it is made to exert pressure, the onion stays in touch with the blades as the onion is being sliced. The gadget often has safeguards like guards or shields to avoid unintentional contact with the blades as a matter of safety. Some versions could additionally include settings that can be changed to alter the onion slices' thickness. Overall, the automatic onion slicer pusher simplifies the task of slicing onions by automating the manual pushing action. It provides convenience, efficiency, and consistent results, making it a valuable tool in professional kitchens or for individuals who frequently prepare onions in large quantities.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The background study for developing an automatic onion slicer to prevent eye irritation, sore hands, and cuts involves researching and understanding the issues associated with manual onion slicing and the existing techniques used to mitigate these problems. It also includes exploring the causes and mechanisms behind eye irritation, sore hands, and cuts that occur during the process.

Onions contain sulphur compounds that, when cut or sliced, release volatile substances, including sync-propanetriol-S-oxide. These compounds can irritate the eyes, leading to tearing, stinging, and discomfort. Understanding the chemical composition and factors contributing to onion irritation is crucial for developing effective prevention measures.

Manual Onion Slicing Techniques: Traditional methods of onion slicing involve using a knife, which requires manual dexterity and exposes the hands to the risk of cuts and soreness. Analysing the common techniques, challenges faced, and potential safety concerns associated with manual slicing helps identify areas for improvement.

By conducting a comprehensive background study, researchers gain a deeper understanding of the issues related to onion slicing, existing solutions, and user requirements. This knowledge forms the foundation for developing an innovative and effective automatic onion slicer that successfully addresses the identified problems of eye irritation, sore hands, and cuts during onion preparation.