

Avishkar Mahotsav : 2021-22

Title of the Project : Instant Garlic Peeling Machine

Criterion : Engineering and Technology

Summary of the Project :

1. Requirements: A/C Three speed motor 1320 RPM single phase 50watts 0.60 AMP, 8 mm Shaft, Pvc hol Capler, 8mm Copper Bush, 2mm black rubber, 3mm PVC pipe, 9' x 9' plywood

2. Reason for selection of topic of project : Garlic (*Allium sativum* L.) is one of the most perennial bulb crops of Liliaceae family. It is widely used as a condiment and for medicinal and pharmaceutical preparations. Traditional methods of garlic peeling are laborious, time and cost intensive. The present study was undertaken to develop and evaluate the performance of small capacity garlic peeler so as to overcome the time consumption and cost intensiveness. Engineering properties of garlic relevant to peeler development were identified and measured. It worked on the abrasion principle with very little damage to the cloves after peeling. The peeler was analyzed for its performance at different roller speeds and pretreatment conditions.

3. Working Principle: The full garlic-peeling machine works on the principle of conversion of electrical energy from electrical motor into mechanical energy in terms of rotating shaft. A/C Three speed motor is used to rotate the shaft at 1320 rpm (,50 watts 0.60 AMP)

4. Working Mechanism : whole garlic is put into the into the barrel of peeling machine, where the vertical shaft with the rubber pad rotates. The garlic comes in contact with the rubber pad and other garlic, and the skin is blown off and dropped. The blower part is placed near the outlet and the skin is blown to the dust collector through a plastic tube. Collect the peeled garlic through the collection box at the exit without skin. When whole garlic goes into the peeling barrel, it splits into individual pieces (without damage) that peel off as they move through the rotation axis. It can peel about 500 gms of garlic in time as less as two minutes and works on regular power supply with absolutely no extra requirements.

5. Advantages : This instant garlic peeling machine has User friendly design, it is easily constructible with no special spare parts requirement, portable, time saving and cost efficient.

Shivaji University, Kolhapur
Avishkar Research Convention 2021-22

Rank Sheet

Level of Event: District

Host College: Willingdon College, Sangli

Participation Level: UG

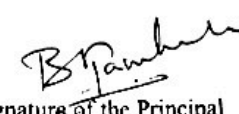
Discipline: Pure Sciences

Rank	Name of contestant	Name of college/University Department	Mobile No.	Title of the Project
1	Jadhav Dhananjay Pandurang	Arts, Commerce & Science College, Ramanandnagar (Id: C-11166)	9420255683	Instant Garlic Peeling Machine
2	Miss. Tanuja Anil Ekunde	Raje Ramrao Mahavidyalaya, Jath (Id: C-11191)	9921474686	Oil-Water Separation by Zno-Based Superhydrophobic Pu Sponges
3	Akanksha Shivling Patil	Willingdon College (Id: C-11178)	7774843306	Application of Lipase-Producing Bacteria in Detergent Production

Place: Sangli

Date: 11th Feb 2022


Signature of the Coordinator


Signature of the Principal
Willingdon College, Sangli.



Shivaji University, Kolhapur
Avishkar Research Convention 2021-22
Rank Sheet

Level of Event: University

Host College/Department: Department of Computer Science, Shivaji University, Kolhapur

Participation Level: UG

Discipline: Pure Sciences

Rank	Name of contestant	Name of college/University Department	Mobile	Title of the Project
1	Jadhav Dhananjay Pandurang	Arts, Commerce & Science College, Ramanandnagar (Id: C-11166)	9420255683	Instant Garlic Peeling Machine
2	Miss. Tanuja Anil Ekunde	Raje Ramrao Mahavidyalaya, Jath (Id: C-11191)	9921474686	Oil-Water Separation by ZnO-Based Superhydrophobic PU Sponges
3	Kiran Prakash Yadav	Dattajirao Kadam Arts, Science & Commerce College, Ichalkaranji (Id: C-11120)	9623319555	Floating Water Filter

Place: Kolhapur

Date: 14/02/2022

Kabir

Signature of the Coordinator

Dr. Kabir G. Kharade



R. K. Kamat

Head of University Department with seal

Prof. (Dr.) R. K. Kamat
Head

Department of Computer Science
Shivaji University, Kolhapur-416004