(12) PATENT APPLICATION PUBLICATION
(21) Application No.202141046326 A
(19) INDIA
(22) Date of filing of Application :11/10/2021
(43) Publication Date : 14/04/2023

(54) Title of the invention : Technological Developments and Machineries in Processing of Alona Fruits and Seeds

| | |
|---|---|
| (51) International classification | :A61K0036470000, A23L0019000000, A23N0004020000, B26D0007010000, A23N0004000000 |
| (31) Priority Document No | :NA |
| (32) Priority Date | :NA |
| (33) Name of priority country | :NA |
| (86) International Application No<br>Filing Date | :PCT//<br>:01/01/1900 |
| (87) International Publication No | : NA |
| (61) Patent of Addition to Application Number<br>Filing Date | :NA<br>:NA |
| (62) Divisional to Application Number<br>Filing Date | :NA<br>:NA |

(71)**Name of Applicant :**
**1)Prasanth**
Address of Applicant :Padmarengam Pazhavady Street Nedumangadu Kerala India
(72)**Name of Inventor :**
**1)Revathy M B**
**2)Dr Ramesh Unnikrishnan**
**3)Raj Mohan**
**4)Neethi narayanan**
**5)Dr K C Chandrasekharan Nair**

(57) Abstract :
India is second largest producer of fruits and vegetables in the world and is leader in various fruits and vegetables area and production. Due to perishable nature of horticultural produce their value addition is the prime necessity to preserve them for long time at the time of glut and to make them available in off season. Their processing needs advanced mechanization and new processing methodology to be developed for ease of harvesting, handling, processing and storage to reduce the human drudgery. India ranks first in the area under production and productivity of aonla or Indian gooseberry (Emblica officinalis Gaertn). It belongs to genus Emblica of the family Euphorbiaceae and order Euphorbiales. It is well known Indian fruit for its medicinal and therapeutic properties from the ancient time in India. Aonla fruit is perishable and thus needs to be processed after few days of harvesting or else immediate marketing of raw a fruit is required. Raw aonla fruit is not much acceptable by consumers because of its high acidic nature and its astringent taste. But the aonla products like candy, supari, pickle, preserve, Triphala and chavaprash are very famous and have huge demand in the market because of their health benefits. Wide research has been carried out for development of equipment and machineries for aonla processing. In this work, an attempt was made to develop equipment for removing the aonla stone and slicing pulp for small-scale and household purpose. The capacity of the equipment was found 12 to 14 kg/h. this capacity of anola slicing and destoning was about 10 times greater than the manual operation. It consisted of a hopper, a pneumatic punching machine, a conveying system, and an electronic control unit in a master frame. A moving circular conveyor disc with holes at the equal distances designed to convey the fruit to the deseeding position where the fruit platform was fixed at the disc which also has a center hole. Above the fruit platform, a pneumatic punching machine with some extra power was fixed concentrically. The seed removing operation was carried out by a pneumatic type controller which moves the punching plunger up and down with the help of compressed air. At every punch seed was removed and collected in the seed collecting tray. Then the deseeded fruit was conveyed to the discharge end. The effectiveness of the machine and fruit pulp wastage varied with the size of the fruit.

No. of Pages : 9 No. of Claims : 4