



P.O. Box 108
Kenmore Q 4069 Australia
Email: sally.brown@uq.net.au

Phone: (07) 3201 2808
Fax: (07) 3201 2809
Mobile: 0407 178 2000

Certificate Of Attendance

This is to certify that

Hassan Sadrnia


attended the

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Horticulture Conference*

conducted on

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**Carlton Crest Hotel
Brisbane, Australia**


for **Dr Tim O'Hare**

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Program and Abstracts



RURAL INDUSTRIES RESEARCH
AND DEVELOPMENT CORPORATION



Horticulture Australia



Queensland Government
Department of Primary Industries



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Design of Continuous Microwave Dryer for Pistachio

Sadunia, H., Rajabipour, A

In conventional dryers because of case-hardening problem, prolong drying and high temperatures are necessary. This causes low quality of final product and low efficiency of drying process. This research aimed to apply Microwave Energy in order to produce high quality product with low cost. Microwave directly affect on product moisture and generate heat. So it eliminates the need for transferring heat from the dry surface into the wet core. Therefore, it is decided to design a Microwave Drying oven. In order to determine the characteristics of the apparatus, Pistachio was adapted. Because pistachio ranks second among non-oil exporting product of Iran and it is highly sensitive to infection which causes serious problems in conventional drying methods. Diameter, length, slope of rotating cylinder, dimensions of cavity, Microwave Power requirement, location, type and number of Magnetrons were determined, assuming 1400 kg/hr as input rate. Moisture content of fresh Pistachio is 30% which will decrease to 7% after drying. Microwave Power density calculated to be 0.4 W/g (based on dry material) for this apparatus which agrees with the value reported by other researchers. Results show that the designed apparatus is suitable for cereals and other kind of nuts.
