Mathematical modeling of cashewnut processing parameters

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■ **ABSTRACT :** Cashew (*Anacardium Occidentale* L.) is one of the important tropical crops having high export potential due to high market value of kernels. In the study "Vegurla-4" variety of cashewnut was processed by direct steam roasting method for studying maximum per cent whole kernel recovery, drying behaviour of kernels and sensory properties of cashew kernel. The treatments were combinations of steam pressure *viz.,* 10, 15 and 20 psi and time of steaming *viz.,* 10, 15 and 20 min. Statistical R. B. D. analysis revealed that the treatment 20 psi with 10 min. gave maximum 90.08 per cent whole kernels. The pressure factor was significant while time factor was found to be non-significant in 3^2 factorial designs. The mathematical model developed gave the optimum pressure 18.76 psi for maximum shelling percentage. The treatment consisting of 15 psi and 15 min gave better result during drying study with lowest equilibrium moisture content and highest drying constant. The sensory study revealed that among treatments colour and texture varied significantly. Overall, treatment with steam pressure 20 psi and steaming time 15 min. was found to be most suitable.

■ **KEY WORDS :** Cashewnuts, Direct steaming roasting, Whole kernel recovery, Steam pressure, Steaming time, Sensory

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