

DESIGN, DEVELOPMENT AND ANALYTICAL STUDY OF SOLAR DRYER FOR AGRICULTURAL PRODUCTS

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Abstract

Solar drying technology stands as an eco-friendly and sustainable approach to the drying of various products. This abstract provides a brief overview of the key components and principles of solar dryers while addressing pertinent challenges in the field. The primary objective of this solar dryer project is to design, develop, and implement an efficient and sustainable solar drying system. This system aims to address the inefficiencies of traditional drying methods, reduce dependence on non-renewable energy, and provide an accessible solution for farmers and communities. By doing so, the project seeks to contribute to the reduction of post-harvest losses, promote sustainable agricultural practices, and mitigate the environmental impact of drying processes. The solar dryer represents a crucial advancement in sustainable and eco-friendly drying technology. By harnessing solar energy, this innovative system addresses the inefficiencies of traditional drying methods, significantly reducing post-harvest losses and promoting resource conservation. The integration of modern components such as efficient solar collectors, controlled drying chambers, and smart control systems enhances overall performance and adaptability. While challenges like initial costs and weather dependence exist, ongoing research and development are poised to overcome these hurdles. The solar dryer stands at the forefront of environmentally conscious drying solutions,

Received:03.07.2024; Accepted: 20.08.2024

Keywords: Solar drying, environmental impact, solar collectors, sustainable, agricultural

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How to cite this article: Girish L. Allampallewar, Swapnil N. Kakade, Prakash V. Saruk, Tushar G. Thokal, Mangesh R. Walekar, Design, development, and analytical study of solar dryer for agricultural products, 1 (2024), 36-48

offering a scalable and accessible alternative that aligns with global efforts towards greener and more sustainable agricultural practices.