



DEVELOPMENT AND OPTIMIZATION OF AN OZONE FOOD PRESERVATION SYSTEM USING RESPONSE SURFACE MODELLING (RSM)

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ABSTRACT

This paper is aimed to design and implement an ozone food preservation system to increase the shelf life of food products. An experimental procedure based on response surface modeling has been proposed in order to optimize the geometrical dimensions of a planar surface dielectric barrier discharge ozone generator, with minimum energy consumption. The experiments were conducted in an ozone-treated cold room using green pepper, strawberries and sardines. A comparative analysis using a similar untreated control room has shown that such a system improves significantly the shelf life of the products for long-term storage.
