

# **MODELLING OF OSMOTIC DEHYDRATION PROCESS OF PEAR (*PYRUS COMMUNIS L.*) IN TERNARY SOLUTIONS OF SUGAR AND CALCIUM SALT USING RESPONSE SURFACE METHODOLOGY**

**Rachana Shalini<sup>1\*</sup>, Alok Saxena<sup>1</sup>, BR Shakya<sup>2</sup>**

## **ABSTRACT**

The holistic effects of temperature (40-60°C), sugar concentration (40-60°B), calcium chloride (1-3%) and immersion time (120-180minutes) were studied during the Osmotic Dehydration (OD) of Pear Sp. in ternary solutions. The Box Behnken Design of Response Surface Methodology (R.S.M.) was used to optimize various process variables like Water Loss, Solids Gain, Weight Reduction and Overall Acceptability by sensory evaluation of the Osmosed Product. Thereby establishing these as the Response Variables during Osmotic Dehydration of Pear. Optimized conditions were found to be 59.57°C temperature, 53.73°B sugar concentration, 2.27% calcium lactate salt and 151.9 minutes immersion time; for minimizing solid gain and maximizing water loss, weight reduction and overall acceptability.