

## EFFECT OF CYLINDRICAL SHAPE POTATO ON DRYING KINETICS USING FLUIDISED BED DRYER

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**ABSTRACT :** The effect of air temperatures and cylindrical shape of with three D:L ratio of shape on the drying kinetics of potato (*Solanum tuberosum*) in fluidized bed dryer were investigated. Drying characteristics of potato were evaluated in fluidized bed dryer. The drying was carried out at three different drying temperatures of 50°C, 60°C and 70°C at 7 m/s air velocity. Drying data were analysed to obtained effective diffusivity of moisture transfer. During drying moisture transfer from potato were described by Fick's diffusion model. Two mathematical models available in literature were fitted to experimental data. The Page model gave better fit than simple exponential model. The Arrhenious activation energy value expresses the effect of temperature on diffusivity.

**Key Words:** Potato, fluidised bed drying, cylindrical shape, D:L ratio, diffusivity, activation energy.