

# **MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR-05**

(A Govt. Aided UGC Autonomous Institute Affiliated to RGPV, Bhopal)

**Department of Chemical Engineering**

## **Mass Transfer - I Lab**

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1. To determine the diffusion coefficient of liquid vapor in air by Stefan's tube.
  2. To study the rate of dissolution of rotating cylinder and then to calculate the mass transfer coefficient
  3. To investigate the mass transfer characteristics of a wetted surface column unit.
  4. To investigate the characteristics of a cooling tower.
  5. To study the drying characteristics of wet granular material using natural and forced circulation in a tray dryer.
  6. To prepare the drying rate curve for fluidized dryer.
  7. To study the characteristics of spray dryer.
  8. To study the characteristics of drum and tunnel dryer.
  9. To find out the crystal yield with and without seeds.
  10. To draw the tie lines and plot equilibrium curve for given ternary system.
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## **Mass Transfer - II Lab**

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1. To study the flooding and loading of packed columns using different type of packing
  2. To study of different type of plates and packings
  3. Preparation of the Vapor Liquid Equilibrium and Boiling point diagram for binary liquid mixture
  4. Determination of relative volatility of a given system of acetic-acids water
  5. To verify Rayleigh equation for differential distillation of binary system
  6. To study Steam distillation Process.
  7. To study Batch distillation process.
  8. To study Continuous distillation process.
  9. Experimental study on packed tower distillation unit.
  10. Experimental study on Sieve plate distillation unit.
  11. To study Bubble cap distillation column.
  12. To study the adsorption of a gas in a packed column and calculation of NTU and HTU
  13. To perform Batch adsorption and verify Freundlich law and Langmuir isotherm
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