## Plug Flow Reactor Data

Reaction : $NaOH+CH_3COOC_2H_5 \rightarrow CH_3COONa+C_2H_5OH$

NaOH=A, $CH_3COOC_2H_5$= B

Strength of Succinic acid = (N/50) = 0.02N

$C_{A0}$ = 0.049 mol/L; $C_{B0}$= 0. 1 mol/L → $C_{A0}$ is corrected by standardization.

5 ml sample from reactor outlet is titrated with (N/50) succinic acid and titration is repeated thrice.

1. Flow rate of NaOH = Flow rate of Ethyl acetate= 7.5lit/hr= 0.125lit/min=

   Sample volume for titration=5ml

| $C_{A0}$, mol/L | Titre volume(ml) |
|---|---|
| 0.049 | 1.7 |
| 0.049 | 1.8 |
| 0.049 | 1.9 |

2. Flow rate of NaOH = Flow rate of Ethyl acetate=10 lit/hr = 0.1666lit/min
   Sample volume for titration=5ml

| $C_{A0}$, mol/L | Titre volume(ml) |
|---|---|
| 0.049 | 2 |
| 0.049 | 2.2 |
| 0.049 | 2.5 |

3. Flow rate of NaOH = Flow rate of Ethyl acetate= 12.5 lit/hr= 0.2083lit/min
   Sample volume for titration=5ml

| $C_{A0}$, mol/L | Titre volume(ml) |
|---|---|
| 0.049 | 2.5 |
| 0.049 | 2.5 |
| 0.049 | 2.6 |