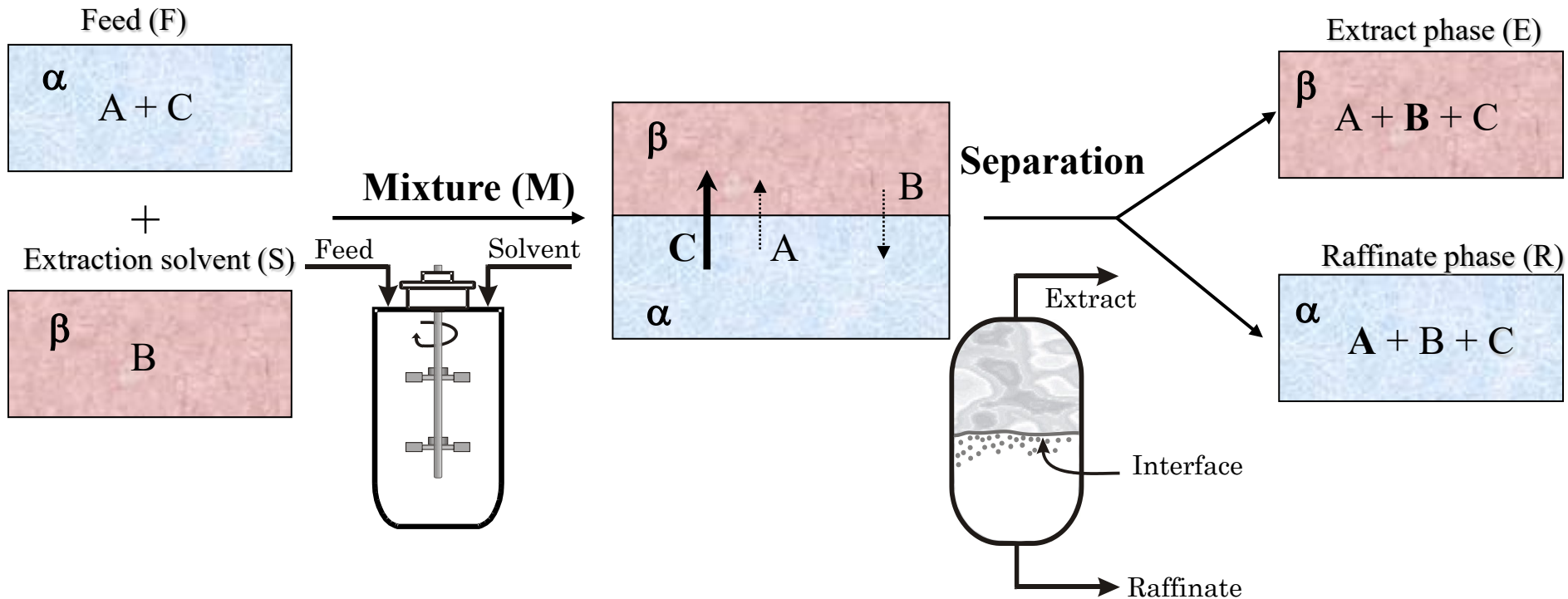


Liquid – Liquid Extraction

Processos de Separação

LEQB

2023/2024



A: **Water** (diluent)

C: **Acetone** (solute)

B: **n-Hexane** (solvent)

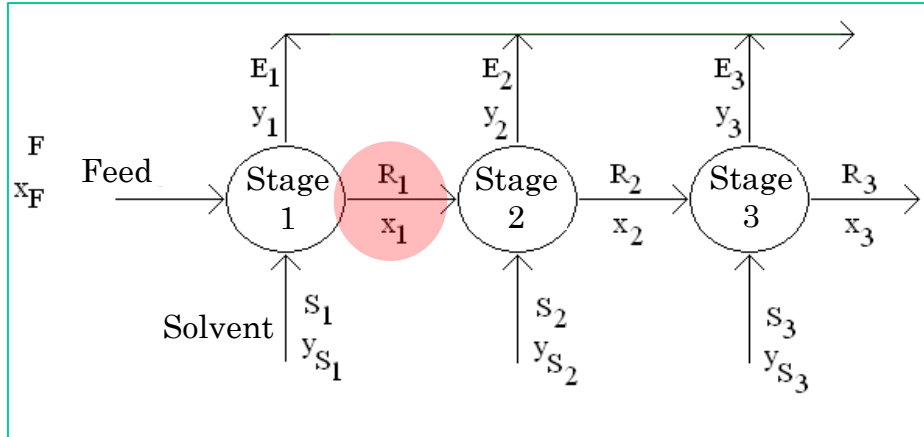
S - solvent flowrate (B)

F - feed flowrate (A + C)

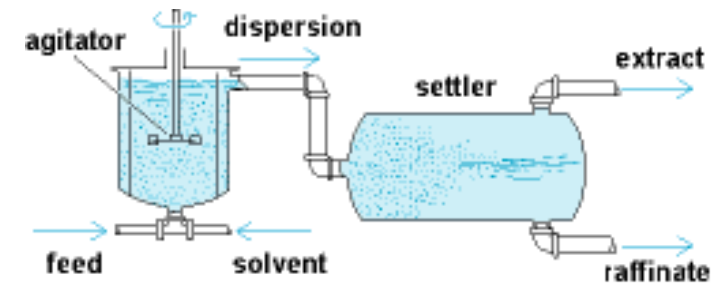
E - extract phase flowrate

R - raffinate phase flowrate

2. Multi-stage extraction (Cross Flow)



$$\Rightarrow x_3 < x_2 < x_1$$



Mixer

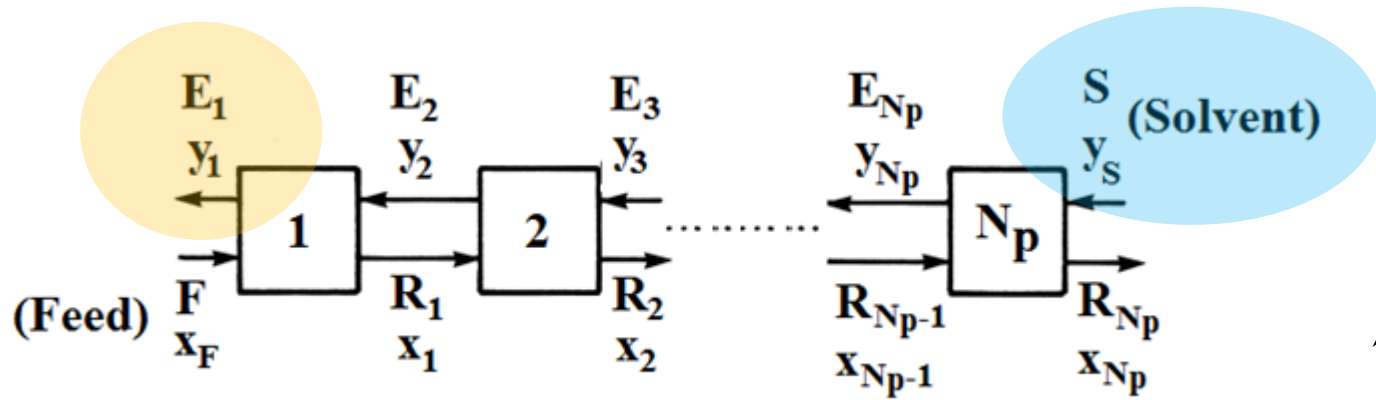
Settler

(Misturador) (Decantador)

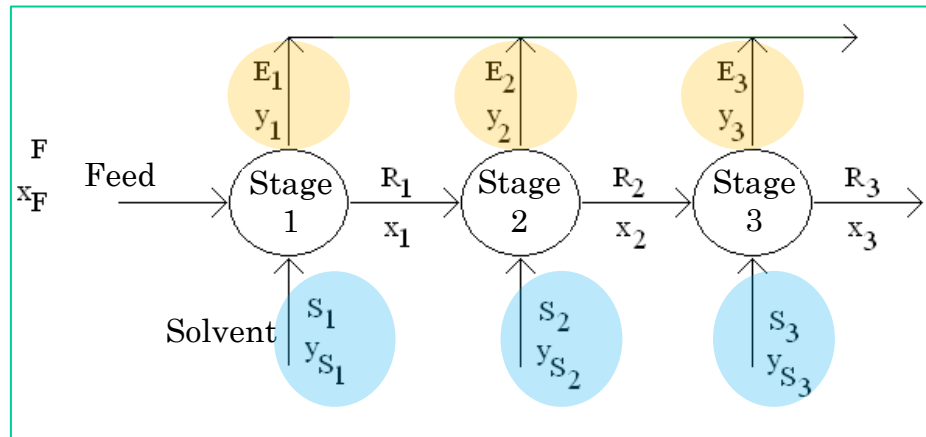
Main disadvantage: $y_3 < y_2 < y_1$

Problem 1

3. Countercurrent Extraction



- Lower solvent consumption
- Less polluting
- More efficient



Problem 2

