

i) $0 \leq A \leq 13 \text{ kg/día}$
 $0 \leq B$
 $80 \text{ kg/día} \leq C$

Materia prima A: Consumo de A según C prod en reactor (AR_i)

Reactor 1: $A = K_{1,A}^1 + K_{2,A}^1 C_A^1 + K_{3,A}^1 C_A^{12} \rightarrow AR_1$

Reactor 2: $A = K_{1,A}^2 + K_{2,A}^2 C_A^2 + K_{3,A}^2 C_A^{22} \rightarrow AR_2$

Materia prima B: Consumo de B según C prod en reactor (BR_i)

Reactor 1: $B = K_{1,B}^1 + K_{2,B}^1 C_B^1 + K_{3,B}^1 C_B^{12} \rightarrow BR_1$

Reactor 2: $B = K_{1,B}^2 + K_{2,B}^2 C_B^2 + K_{3,B}^2 C_B^{22} \rightarrow BR_2$

$28 \text{ kg/día} \leq C_A^1 + C_B^1 \leq 65 \text{ kg/día} \quad C_A^1 + C_B^1 = PCR1$

$20 \text{ kg/día} \leq C_A^2 + C_B^2 \leq 58 \text{ kg/día} \quad C_A^2 + C_B^2 = PCR2$

$C_A^1 + C_A^2 + C_B^1 + C_B^2 = C$

Función obj: $obj = BR_1 + BR_2 \rightarrow \text{sea min}$

$B = BR_1 + BR_2$

$A = AR_1 + AR_2$

iii) Luego de resolver:

$C_A^1 \geq 0$
 $C_B^1 \geq 0$
 $C_A^2 \geq 0$
 $C_B^2 \geq 0$

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|----------------------------|------------------|
| C prod con A en Reactor 1: | $C_A^1 = 9,409$ |
| C " " A en " 2: | $C_A^2 = 20,592$ |
| C " " B en " 1: | $C_B^1 = 18,990$ |
| C " " B en " 2: | $C_B^2 = 31,407$ |