
Scheme-4 Reactor-2

Part-3, Case-2

*tend = 240 sec
k1 = 0.1, k2 = 0.002*

NBt/NA_t = 1.12405

*Exponent a = 0.5
Exponent b = 1.5
Exponent c = 0.5
Exponent d = 1.5*

*WA = 200
WB = 56.2026
NBt = 2.99747
Vt = 2.1281
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25307
CB0 = 1.40852*

*Total input = 256.203 kg
Total output = 256.203 kg*

Chemical Balance Error = 0.000336449 kg (% 1.31321e-06)

*Solver: Explicit Runge-Kutta (4,5) Variable step (Dormand-Prince Pair)
Error tolerance: 0.1%*

Final Concentrations with Step Size limited to 0.001

*CA (final) = 0.0125222
CB (final) = 0.00986998
CR (final) = 1.08245
CS (final) = 0.158098*

*CA @ 120.0s = 0.0231145
CB @ 120.0s = 0.0695635
CR @ 120.0s = 1.12096
CS @ 120.0s = 0.108997*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125222
CB (final) = 0.00986998
CR (final) = 1.08245
CS (final) = 0.158098*

