
Scheme-8 Reactor-2

Part-3, Case-2

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

NBt/NA_t = 1.07604

*Exponent a = 0.5
Exponent b = 1.5
Exponent c = 1
Exponent d = 1*

*WA = 200
WB = 53.8021
NBt = 2.86945
Vt = 2.1269
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25378
CB0 = 1.34912*

*Total input = 253.802 kg
Total output = 253.802 kg*

Chemical Balance Error = 0.00014232 kg (% 5.60753e-07)

*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) = 0.0125433
CB (final) = 0.0409688
CR (final) = 1.17432
CS (final) = 0.0669144*

*CA @ 120.0s = 0.0386378
CB @ 120.0s = 0.0832971
CR @ 120.0s = 1.16446
CS @ 120.0s = 0.0506807*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125433
CB (final) = 0.0409688
CR (final) = 1.17432
CS (final) = 0.0669144*

