
Scheme-6 Reactor-2

Part-2, Case-2

*tend = 240 sec
k1 = 0.1, k2 = 0.01*

NBt/NA_t = 1.15226

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

*WA = 200
WB = 57.6131
NBt = 3.0727
Vt = 2.12881
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25266
CB0 = 1.44339*

*Total input = 257.613 kg
Total output = 257.613 kg*

Chemical Balance Error = 0.000350115 kg (% 1.35907e-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) = 0.0125302
CB (final) = 0.038798
CR (final) = 1.07566
CS (final) = 0.164465*

*CA @ 120.0s = 0.0353695
CB @ 120.0s = 0.0774098
CR @ 120.0s = 1.0686
CS @ 120.0s = 0.148693*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125302
CB (final) = 0.038798
CR (final) = 1.07566
CS (final) = 0.164465*

