
Scheme-5 Reactor-2

Part-3, Case-2

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

NBt/NA_t = 1.44153

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

*WA = 200
WB = 72.0766
NBt = 3.84409
Vt = 2.13604
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.24842
CB0 = 1.79963*

*Total input = 272.077 kg
Total output = 272.077 kg*

Chemical Balance Error = 0.000667285 kg (% 2.45256e-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) = 0.0124763
CB (final) = 0.2513
CR (final) = 0.923547
CS (final) = 0.312394*

*CA @ 120.0s = 0.0322587
CB @ 120.0s = 0.402449
CR @ 120.0s = 1.03513
CS @ 120.0s = 0.181027*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0124763
CB (final) = 0.2513
CR (final) = 0.923547
CS (final) = 0.312394*

