
Scheme-9 Reactor-2

Part-2, Case-2

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

NBt/NA_t = 1.77088

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

*WA = 200
WB = 88.5438
NBt = 4.72234
Vt = 2.14427
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.24362
CB0 = 2.2023*

*Total input = 288.544 kg
Total output = 288.545 kg*

Chemical Balance Error = 0.00167471 kg (% 5.80401e-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) = 0.0124434
CB (final) = 0.190107
CR (final) = 0.450164
CS (final) = 0.781016*

*CA @ 120.0s = 0.0289015
CB @ 120.0s = 0.373695
CR @ 120.0s = 0.600835
CS @ 120.0s = 0.613886*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0124434
CB (final) = 0.190107
CR (final) = 0.450164
CS (final) = 0.781016*

