
Scheme-3 Reactor-2

Part-2, Case-5

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

NBt/NA_t = 1.44783

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

*WA = 200
WB = 72.3916
NBt = 3.86089
Vt = 2.1362
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.75*

*CA0 = 1.24833
CB0 = 1.80737*

*Total input = 272.392 kg
Total output = 272.393 kg*

Chemical Balance Error = 0.00122091 kg (% 4.48218e-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) = 0.0124925
CB (final) = 1.86109e-12
CR (final) = 0.664299
CS (final) = 0.571533*

*CA @ 120.0s = 0.0152635
CB @ 120.0s = 0.0700326
CR @ 120.0s = 0.72879
CS @ 120.0s = 0.504272*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0124925
CB (final) = -3.80399e-12
CR (final) = 0.664299
CS (final) = 0.571533*

