
Scheme-6 Reactor-2

Part-1, Case-1

*tend = 6 sec
k1 = 100, k2 = 10*

NBt/NA_t = 1.12147

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

*WA = 200
WB = 56.0733
NBt = 2.99057
Vt = 2.12804
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25311
CB0 = 1.40532*

*Total input = 256.073 kg
Total output = 256.074 kg*

Chemical Balance Error = 0.000350125 kg (% 1.36728e-06)

*Solver: Explicit Runge-Kutta (4,5) Variable step (Dormand-Prince Pair)
Error tolerance: 0.1%*

Final Concentrations with Step Size limited to 0.0001

*CA (final) = 0.0125294
CB (final) = 0.000209385
CR (final) = 1.07605
CS (final) = 0.16453*

*CA @ 3.0s = 0.012807
CB @ 3.0s = 0.000742746
CR @ 3.0s = 1.07603
CS @ 3.0s = 0.164274*

Final Concentrations with Step Size limited to 0.001

*CA (final) = 0.0125294
CB (final) = 0.000209385
CR (final) = 1.07605
CS (final) = 0.16453*

