
Scheme-7 Reactor-2

Part-2, Case-2

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

NBt/NA_t = 1.75699

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

*WA = 200
WB = 87.8494
NBt = 4.6853
Vt = 2.14392
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.24382
CB0 = 2.18538*

*Total input = 287.849 kg
Total output = 287.851 kg*

Chemical Balance Error = 0.00157288 kg (% 5.46425e-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) = 0.0124397
CB (final) = 0.220354
CR (final) = 0.497739
CS (final) = 0.733646*

*CA @ 120.0s = 0.0300373
CB @ 120.0s = 0.375753
CR @ 120.0s = 0.617943
CS @ 120.0s = 0.595844*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0124397
CB (final) = 0.220354
CR (final) = 0.497739
CS (final) = 0.733646*

