
Scheme-3 Reactor-2

Part-3, Case-2

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

NBt/NA_t = 1.17153

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

*WA = 200
WB = 58.5763
NBt = 3.12407
Vt = 2.12929
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25237
CB0 = 1.46719*

*Total input = 258.576 kg
Total output = 258.577 kg*

Chemical Balance Error = 0.000412704 kg (% 1.59606e-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) = 0.0125335
CB (final) = 0.0335255
CR (final) = 1.04602
CS (final) = 0.193823*

*CA @ 120.0s = 0.028941
CB @ 120.0s = 0.119381
CR @ 120.0s = 1.09906
CS @ 120.0s = 0.124375*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125335
CB (final) = 0.0335255
CR (final) = 1.04602
CS (final) = 0.193823*

