
Scheme-9 Reactor-2

Part-3, Case-2

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

NBt/NA_t = 1.40015

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

*WA = 200
WB = 70.0073
NBt = 3.73372
Vt = 2.135
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.24902
CB0 = 1.74881*

*Total input = 270.007 kg
Total output = 270.008 kg*

Chemical Balance Error = 0.000469682 kg (% 1.73952e-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) = 0.0124809
CB (final) = 0.292282
CR (final) = 1.01655
CS (final) = 0.219991*

*CA @ 120.0s = 0.0336093
CB @ 120.0s = 0.399217
CR @ 120.0s = 1.08123
CS @ 120.0s = 0.134184*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0124809
CB (final) = 0.292282
CR (final) = 1.01655
CS (final) = 0.219991*

