
Scheme-5 Reactor-2

Part-2, Case-2

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

NBt/NA_t = 1.79408

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

*WA = 200
WB = 89.7041
NBt = 4.78422
Vt = 2.14485
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.24329
CB0 = 2.23056*

*Total input = 289.704 kg
Total output = 289.706 kg*

Chemical Balance Error = 0.00179651 kg (% 6.20118e-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) = 0.0124325
CB (final) = 0.162114
CR (final) = 0.393264
CS (final) = 0.837591*

*CA @ 120.0s = 0.0278738
CB @ 120.0s = 0.374144
CR @ 120.0s = 0.574411
CS @ 120.0s = 0.641002*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0124325
CB (final) = 0.162114
CR (final) = 0.393264
CS (final) = 0.837591*

