
Scheme-9 Reactor-2

Part-3, Case-1

*tend = 360 sec
k1 = 0.1, k2 = 0.002*

NBt/NA_t = 1.19084

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

*WA = 200
WB = 59.5421
NBt = 3.17558
Vt = 2.12977
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25209
CB0 = 1.49104*

*Total input = 259.542 kg
Total output = 259.542 kg*

Chemical Balance Error = 0.000333199 kg (% 1.2838e-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) = 0.0125222
CB (final) = 0.0950267
CR (final) = 1.08312
CS (final) = 0.156448*

*CA @ 180.0s = 0.0299368
CB @ 180.0s = 0.161456
CR @ 180.0s = 1.11472
CS @ 180.0s = 0.107434*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125222
CB (final) = 0.0950267
CR (final) = 1.08312
CS (final) = 0.156448*

