
Scheme-7 Reactor-2

Part-2, Case-9

*tend = 2400 sec
k1 = 0.1, k2 = 0.01*

NBt/NA_t = 1.13932

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

*WA = 200
WB = 56.9659
NB_t = 3.03818
V_t = 2.12848
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA₀ = 1.25285
CB₀ = 1.42739*

*Total input = 256.966 kg
Total output = 256.966 kg*

Chemical Balance Error = 0.000398171 kg (% 1.54951e-06)

*Solver: Explicit Runge-Kutta (4,5) Variable step (Dormand-Prince Pair)
Error tolerance: 0.01%*

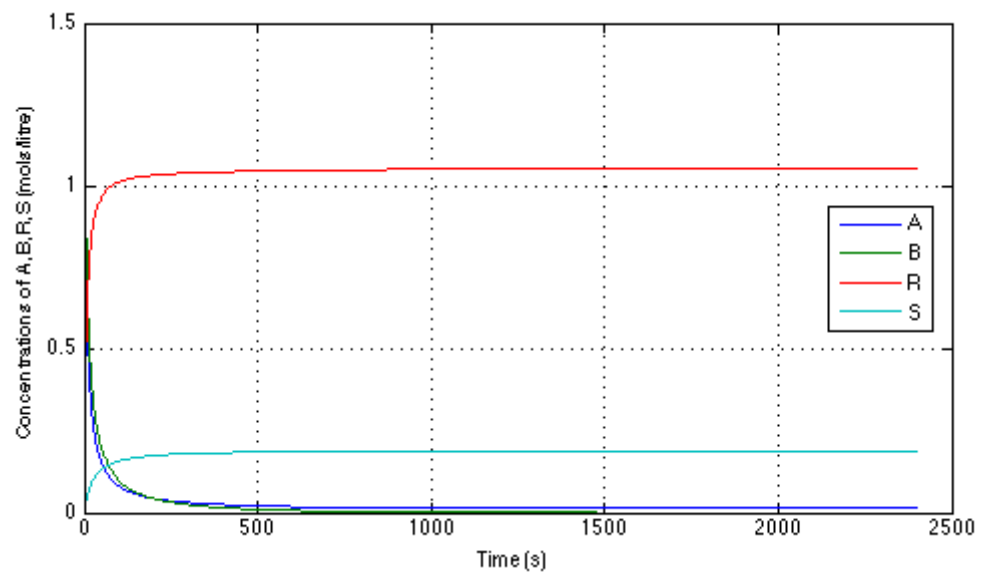
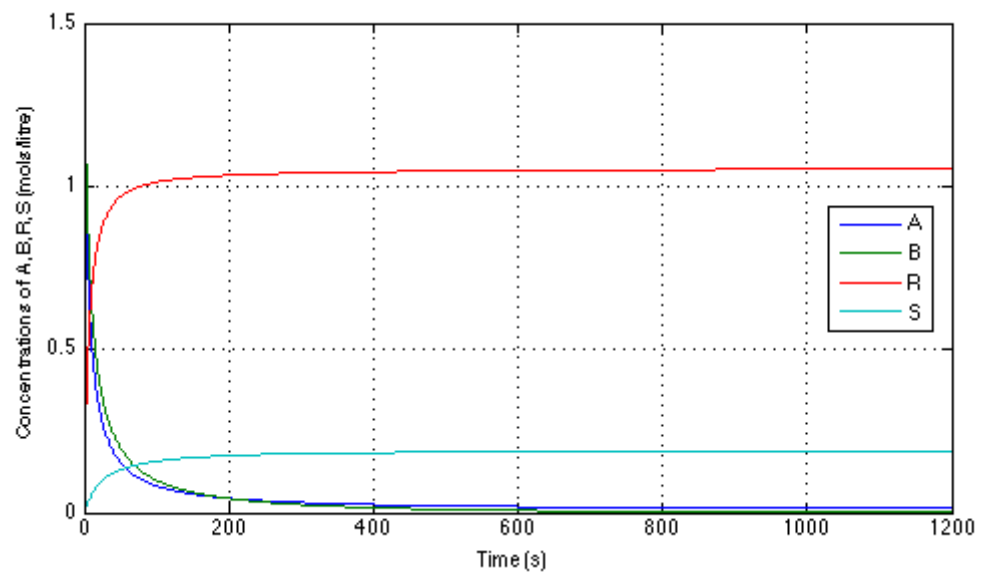
Final Concentrations with Step Size limited to 0.0001

*CA (final) = 0.0125247
CB (final) = 1.83308e-17
CR (final) = 1.05326
CS (final) = 0.187068*

*CA @ 1200.0s = 0.0129293
CB @ 1200.0s = 0.000410485
CR @ 1200.0s = 1.05286
CS @ 1200.0s = 0.187062*

Final Concentrations with Step Size limited to 0.001

*CA (final) = 0.0125247
CB (final) = 1.8471e-15
CR (final) = 1.05326
CS (final) = 0.187068*



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