
Scheme-7 Reactor-2

Part-2, Case-7

*tend = 1200 sec
k1 = 0.1, k2 = 0.01*

NBt/NA_t = 1.14139

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

*WA = 200
WB = 57.0693
NB_t = 3.04369
V_t = 2.12853
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA₀ = 1.25282
CB₀ = 1.42995*

*Total input = 257.069 kg
Total output = 257.07 kg*

Chemical Balance Error = 0.000402511 kg (% 1.56577e-06)

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

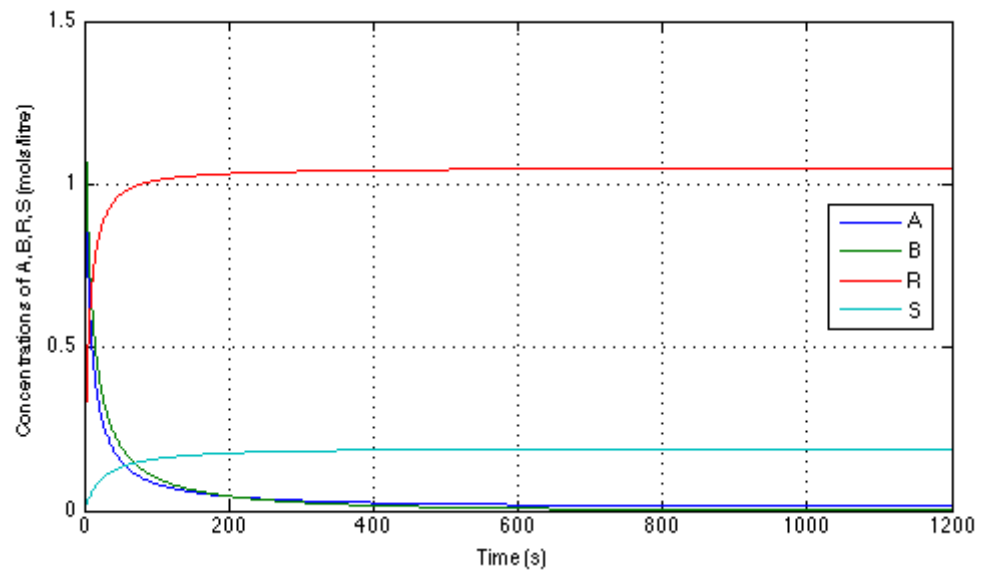
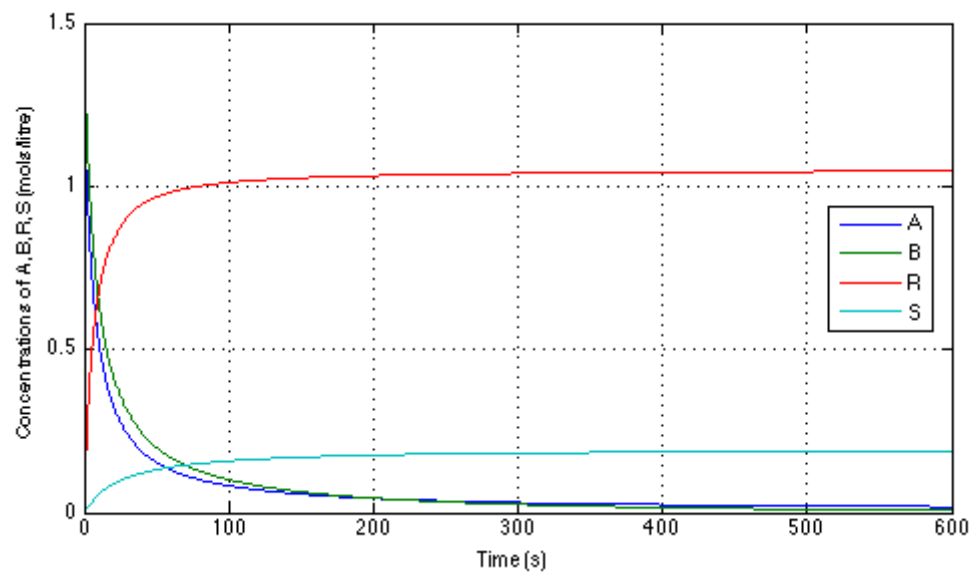
Final Concentrations with Step Size limited to 0.0001

*CA (final) = 0.0125275
CB (final) = 0.000555116
CR (final) = 1.05119
CS (final) = 0.189103*

*CA @ 600.0s = 0.0181354
CB @ 600.0s = 0.00723375
CR @ 600.0s = 1.04665
CS @ 600.0s = 0.188032*

Final Concentrations with Step Size limited to 0.001

*CA (final) = 0.0125275
CB (final) = 0.000555116
CR (final) = 1.05119
CS (final) = 0.189103*



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