
Scheme-9 Reactor-2

Part-2, Case-8

*tend = 1800 sec
k1 = 0.1, k2 = 0.01*

NBt/NA_t = 1.41884

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

*WA = 200
WB = 70.9419
NB_t = 3.78357
V_t = 2.13547
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA₀ = 1.24875
CB₀ = 1.77177*

*Total input = 270.942 kg
Total output = 270.943 kg*

Chemical Balance Error = 0.00114358 kg (% 4.22075e-06)

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

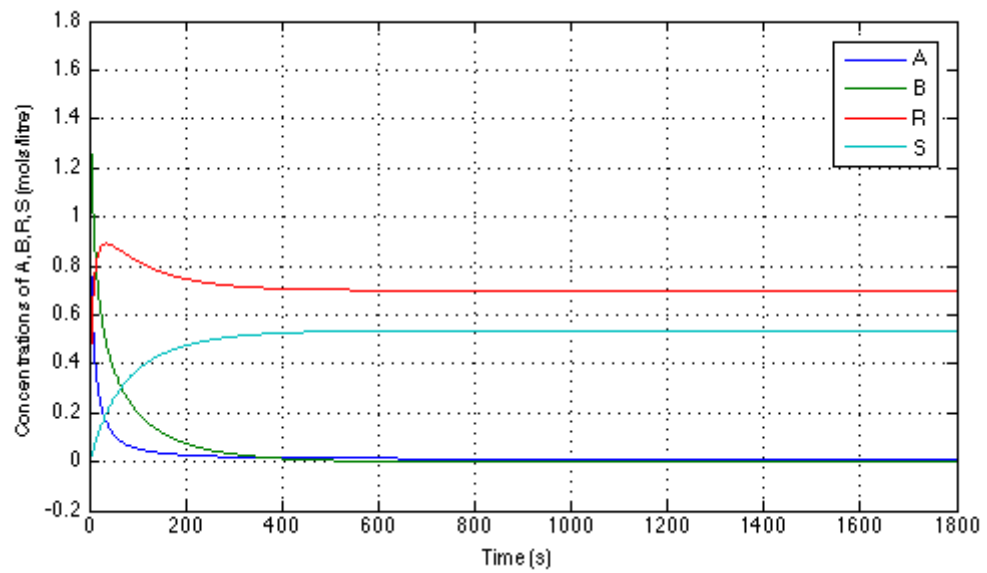
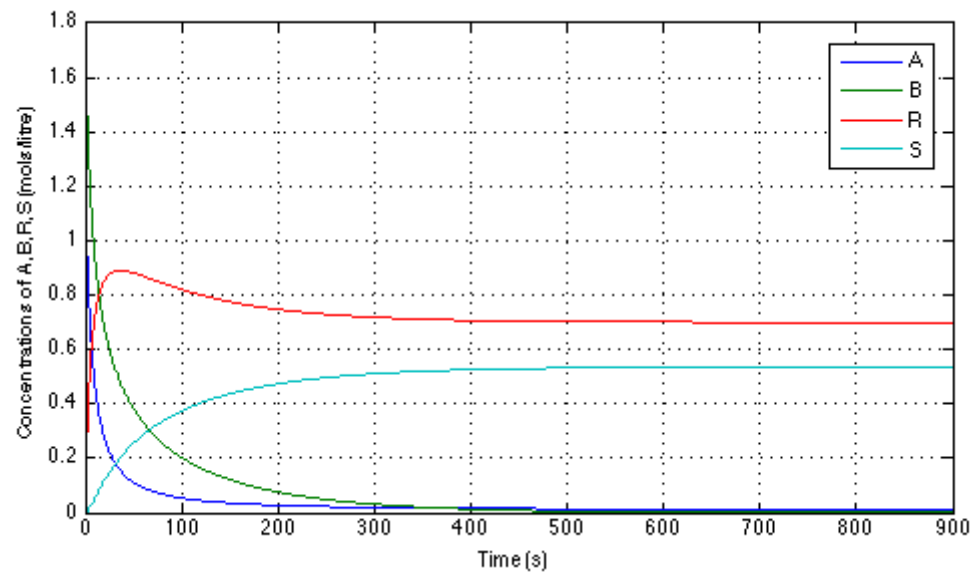
Final Concentrations with Step Size limited to 0.0001

*CA (final) = 0.0124921
CB (final) = -1.81022e-17
CR (final) = 0.700741
CS (final) = 0.535515*

*CA @ 900.0s = 0.0124971
CB @ 900.0s = 5.40886e-06
CR @ 900.0s = 0.700737
CS @ 900.0s = 0.535515*

Final Concentrations with Step Size limited to 0.001

*CA (final) = 0.0124921
CB (final) = 1.83267e-15
CR (final) = 0.700741
CS (final) = 0.535515*



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