
Scheme-1 Reactor-2

Part-2, Case-2

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

NBt/NAt = 1.31288

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

*WA = 200
WB = 65.644
NBt = 3.50101
Vt = 2.13282
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*CA0 = 1.2503
CB0 = 1.64149*

*Total input = 265.644 kg
Total output = 265.645 kg*

Chemical Balance Error = 0.00080001 kg (% 3.01159e-06)

*Solver: Explicit Runge-Kutta (4,5) Variable step (Dormand-Prince Pair)
Error tolerance: 0.1%*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125109
CB (final) = 0.0286094
CR (final) = 0.862694
CS (final) = 0.375095*

*CA @ 120.0s = 0.0246116
CB @ 120.0s = 0.10073
CR @ 120.0s = 0.910614
CS @ 120.0s = 0.315075*

Final Concentrations with Step Size limited to 0.1

*CA (final) = 0.0125109
CB (final) = 0.0286094
CR (final) = 0.862694
CS (final) = 0.375095*

