
Scheme-4 Reactor-1

$t_a = 900 \text{ sec}$, $t_m = 1200 \text{ sec}$
 $k_1 = 0.1$, $k_2 = 0.01$

$NB_t/NA_t = 1.65401$

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

$WA = 200$
 $WB = 82.7004$
 $NB_t = 4.41069$
 $V_t = 2.14135$
 $V_{at} = 1.04135$
 $Tot.Solv. = 2$
 $SolA/(SolR+SolA) = 0.5$

$NA_0 = 2.66667$
 $NB_0 = 0$

Total input = 282.7 kg
Total output = 282.702 kg

Chemical Balance Error = 0.00185444 kg (% 6.55974e-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

$NA \text{ (final)} = 0.026661$
 $NB \text{ (final)} = 1.34706e-10$
 $NR \text{ (final)} = 0.869318$
 $NS \text{ (final)} = 1.77069$

Final Concentrations with Step Size limited to 0.1

$NA \text{ (final)} = 0.0266692$
 $NB \text{ (final)} = 4.39228e-09$
 $NR \text{ (final)} = 0.869331$
 $NS \text{ (final)} = 1.77067$



