

Parameter	Value	Source
Equivalent cell density to OD600	0.3gDW/L ( <i>E. coli</i> )	Bionumbers
<b>ASS enzymatic reaction model</b>		
Initial alkane concentration ( $A_0$ )	$2 \times 10^{-6} \text{ mM}$	Input
Initial fumarate concentration ( $B_0$ )	$2 \times 10^{-6} \text{ mM}$	Input
Total alkylsuccinate synthase (ASS) enzyme concentration ( $E_i^*$ )	$3 \times 10^{-12} \text{ mM}$	[2]
Initial Alkylsuccinate concentration ( $C_0$ )	0 mM	Input
$k_{rc1}$	$1.49 \times 10^{20} \text{ mM}^{-1} \text{ s}^{-1}$	[2]
$k_{-rc1}$	$5.88 \times 10^{13} \text{ s}^{-1}$	[2]
$k_{tst1}$	$4.42 \text{ s}^{-1}$	[2]
$k_{-tst1}$	$2.06 \times 10^9 \text{ s}^{-1}$	[2]
$k_{-pc1}$	$4.63 \times 10^{14} \text{ s}^{-1}$	[2]
$k_{pc1}$	$1.49 \times 10^{20} \text{ mM}^{-1} \text{ s}^{-1}$	[2]
$k_{rc2}$	$1.23 \times 10^{20} \text{ mM}^{-1} \text{ s}^{-1}$	[2]
$k_{-rc2}$	$1 \times 10^{13} \text{ s}^{-1}$	[2]
$k_{tst2}$	$1.04 \times 10^{10} \text{ s}^{-1}$	[2]
$k_{-tst2}$	$2.16 \times 10^{-5} \text{ s}^{-1}$	[2]
$k_{rc3}$	$1.24 \times 10^{20} \text{ mM}^{-1} \text{ s}^{-1}$	[2]
$k_{-rc3}$	$5.45 \times 10^{12} \text{ s}^{-1}$	[2]
$k_{tst3}$	$3.08 \times 10^4 \text{ s}^{-1}$	[2]
$k_{-tst3}$	$6.94 \times 10^{-1} \text{ s}^{-1}$	[2]
$k_{-pc3}$	$1.24 \times 10^{13} \text{ s}^{-1}$	[2]
$k_{pc3}$	$1.25 \times 10^{20} \text{ mM}^{-1} \text{ s}^{-1}$	[2]