

Table S1

Summary of ANOVA for the urea hydrolysis rate model fit

Source	Mean Square	F-value	P-value, Prob.>F
<b>Model</b>	33.00	2272.78	< 0.0001
<b>Lack of Fit</b>	0.011	0.53	0.7075
<b>R<sup>2</sup></b>		0.9997	
<b>Adj. R<sup>2</sup></b>		0.9992	
<b>Pred. R<sup>2</sup></b>		0.9927	
<b>C.V. %</b>		1.06	
<b>Pred. Equ.</b>	$\frac{1}{(r_U + 0.04)} = 8.26 - 2.90*A - 1.62*B + 0.51*C - 1.51*AB - 3.71*AC - 0.38*BC + 6.79*A^2$		

Design-Expert® Software

Factor Coding: Actual

Original Scale

Urea hydrolysis rate

0.105

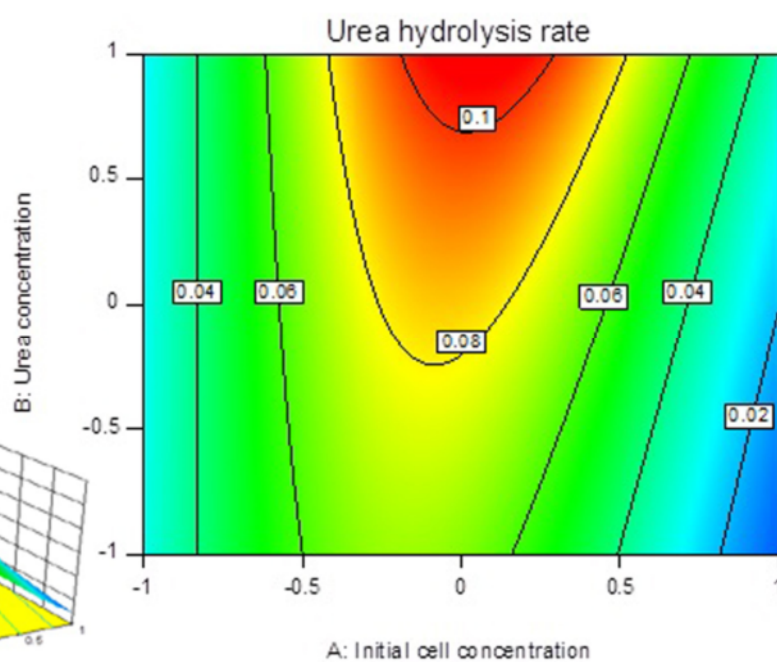
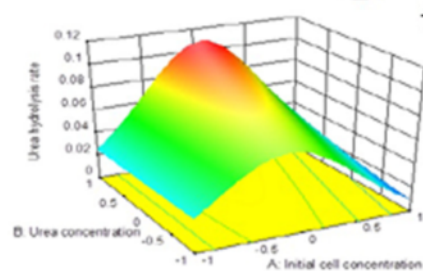
0.001

X1 = A: Initial cell concentration

X2 = B: Urea concentration

Actual Factor

C: Temperature = -1



Design-Expert® Software

Factor Coding: Actual

Original Scale

Urea hydrolysis rate

0.105

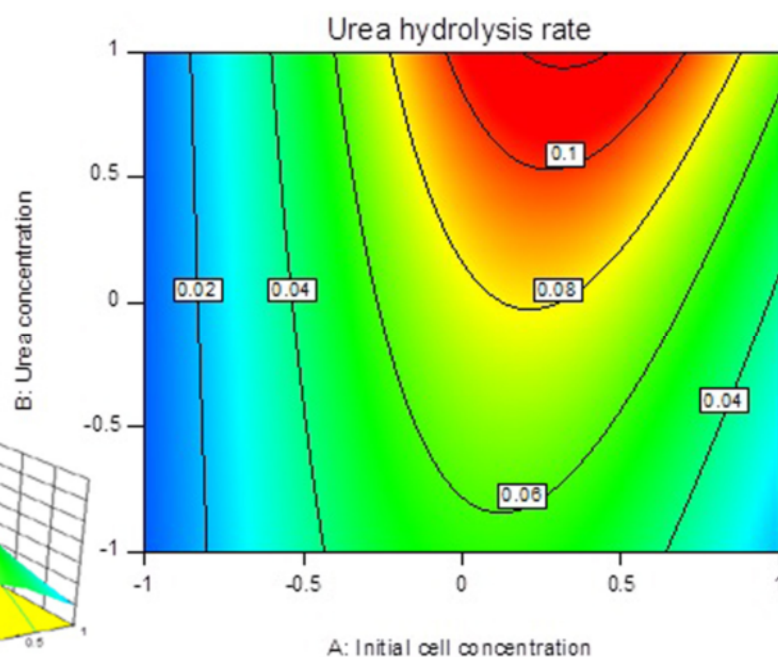
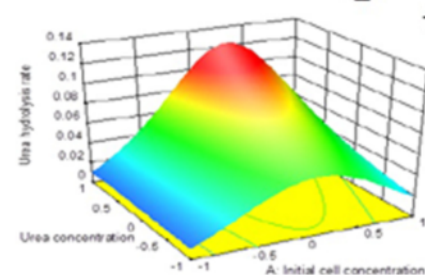
0.001

X1 = A: Initial cell concentration

X2 = B: Urea concentration

Actual Factor

C: Temperature = 0



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Factor Coding: Actual

Original Scale

Urea hydrolysis rate

0.105

0.001

X1 = A: Initial cell concentration

X2 = B: Urea concentration

Actual Factor

C: Temperature = 1

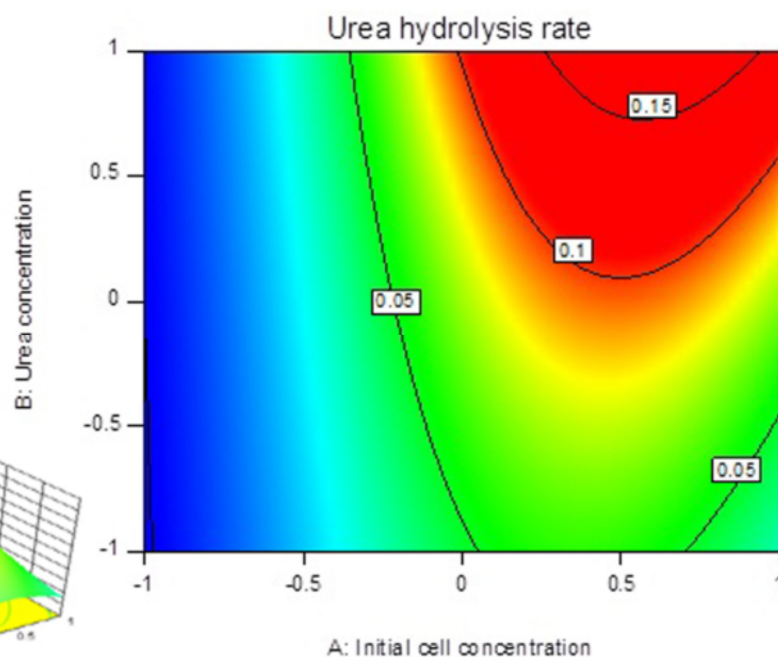
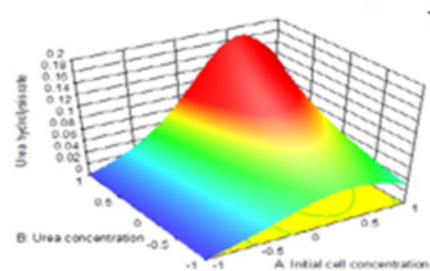
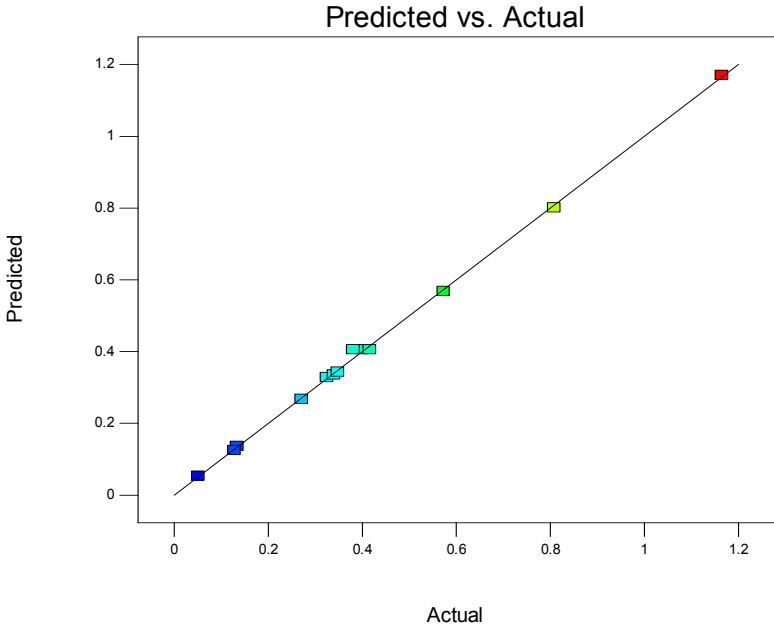


Fig. S1. Response surface plots of the mutual effect of the factors on the urea hydrolysis rate

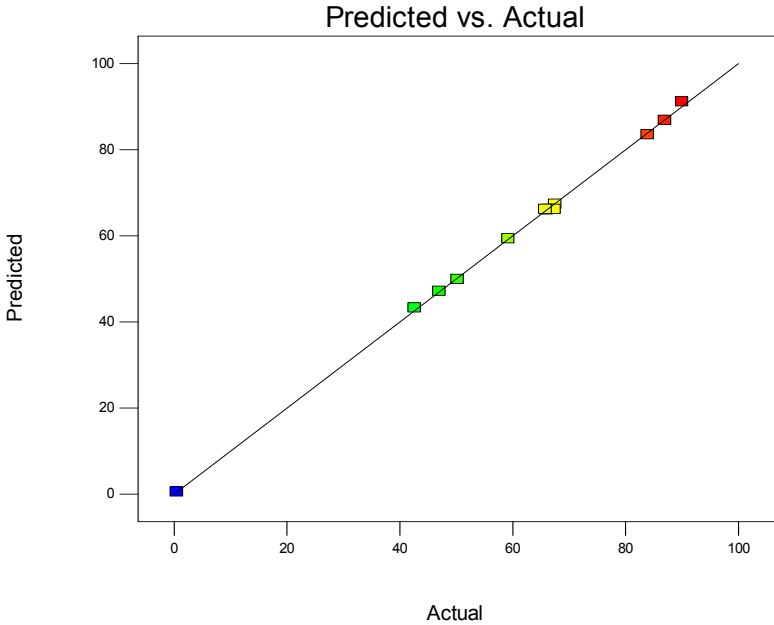
Design-Expert® Software  
Bacterial growth

Color points by value of  
Bacterial growth:  
1.165  
0.051



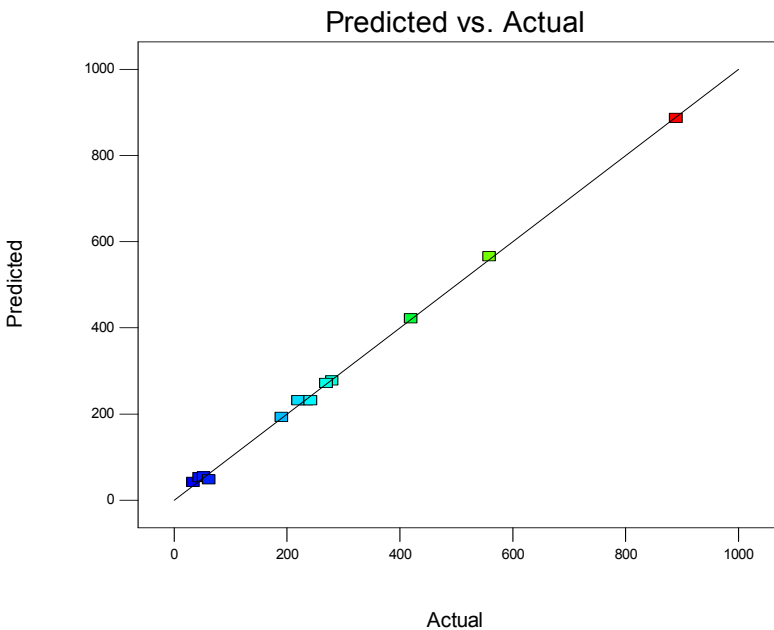
Design-Expert® Software  
Urea hydrolysis potential

Color points by value of  
Urea hydrolysis potential:  
90  
0.5



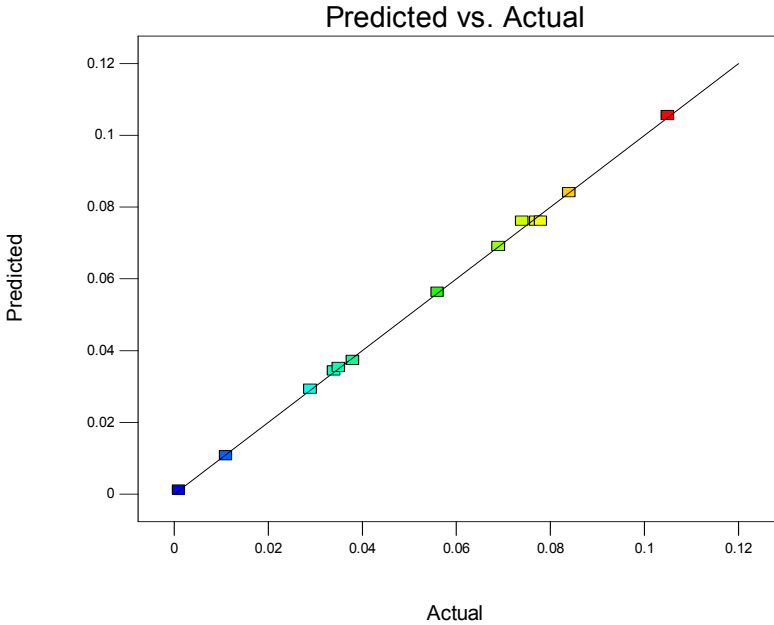
Design-Expert® Software  
Lag duration

Color points by value of  
Lag duration:



Design-Expert® Software  
Urea hydrolysis rate

Color points by value of  
Urea hydrolysis rate:



Design-Expert® Software  
Specific rate of urea hydrolysis

Color points by value of  
Specific rate of urea hydrolysis:  
0.56  
0.001

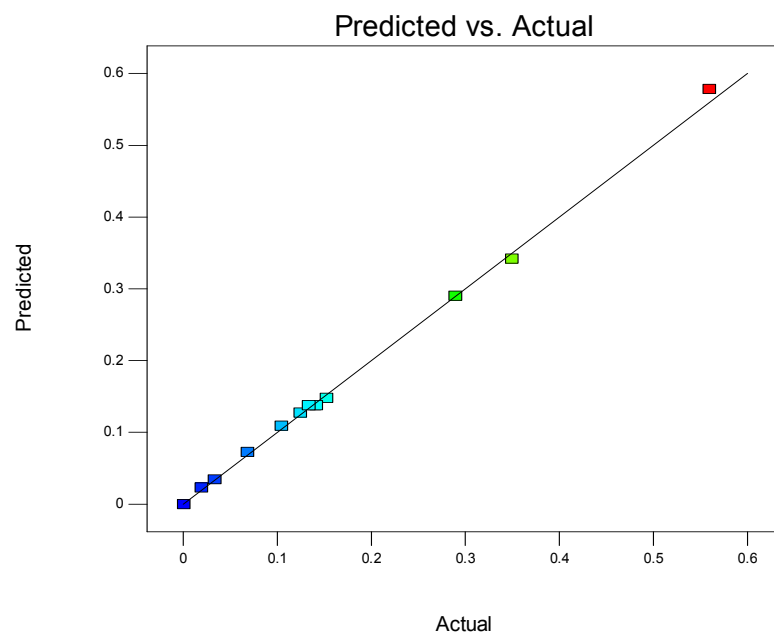


Fig. S2. Predicted responses by each statistical model versus actual observations from the experiments