

Title: Production, characterization and applications of cellulase from thermophilic *Anoxybacillus* and *Bacillus*

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Fig. SI1 Enzyme production at different environmental conditions (a) Production at different incubation periods and with different substrate concentrations (b) Production in different temperatures (c) Production with different inocula size (d) Production in different pH

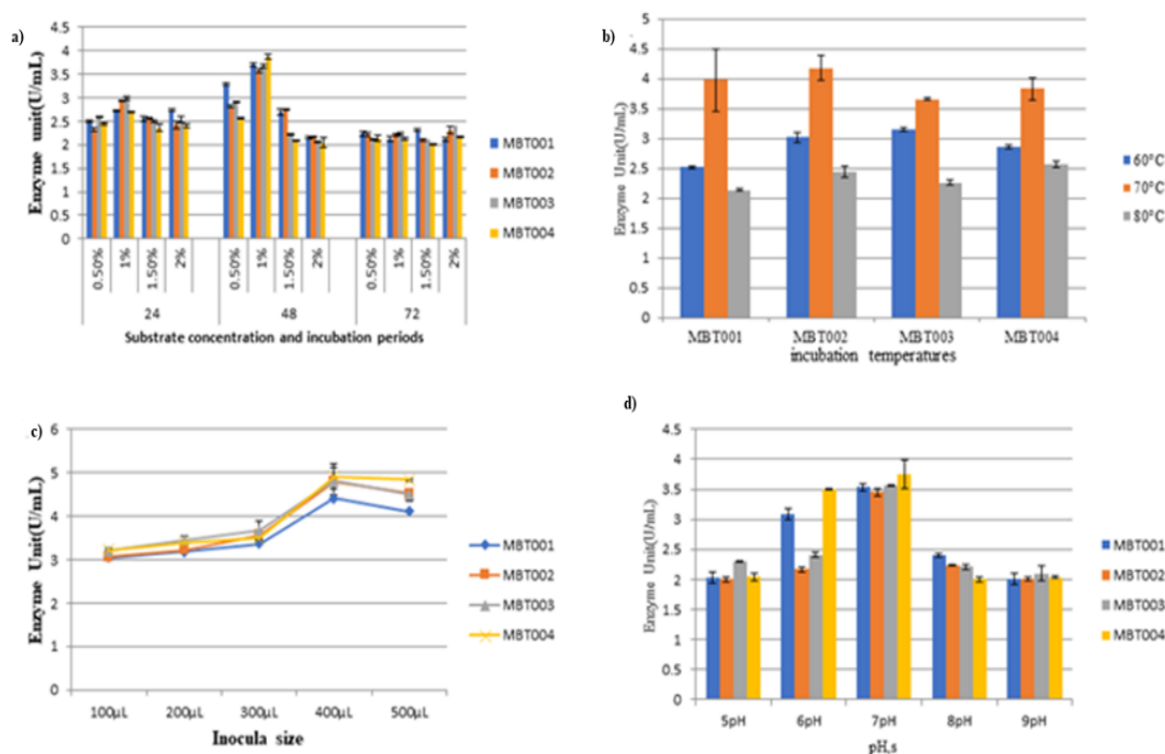


Table SI1 Descriptive statistics of variables used in optimization of enzyme production

Factors	Name	Type	Sub Type	Mini-mum	Maxi-mum	Mean	Std. Dev.
A	Temperature	Numeric	Discrete	60.00	80.00	70.00	3.24
B	Inocula size	Numeric	Discrete	100.00	500.00	150.00	114.71
C	Incubation period	Numeric	Discrete	24.00	72.00	48.00	7.79
D	pH	Numeric	Discrete	5.00	9.00	7.00	0.7255
E	Substrate concentration	Numeric	Discrete	0.5000	2.00	1.05	0.2763

Table SI 2 Linear regression for enzyme production from MBT001

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Model	5.62	5	1.12	3.17	0.0402	significant
A-temperature	0.8267	1	0.8267	2.34	0.1487	
B-inocula size	2.74	1	2.74	7.73	0.0147	
C-incubation period	0.8791	1	0.8791	2.48	0.1374	
D-pH	0.0563	1	0.0563	0.1590	0.6961	
E-Substrate con.	0.8414	1	0.8414	2.38	0.1454	
Residual	4.96	14	0.3540			
Lack of Fit	4.49	10	0.4488	3.84	0.1034	not significant
Pure Error	0.4679	4	0.1170			
Cor Total	10.57	19				

SI Table 3 Linear regression for enzyme production from MBT002

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Model	6.33	5	1.27	3.20	0.0392	significant
A-temperature	0.1703	1	0.1703	0.4302	0.5225	
B-inocula size	5.09	1	5.09	12.85	0.0030	
C-incubation period	0.3333	1	0.3333	0.8418	0.3744	
D-pH	0.0862	1	0.0862	0.2177	0.6480	
E-Substrate conc.	0.3855	1	0.3855	0.9737	0.3405	
Residual	5.54	14	0.3959			
Lack of Fit	4.90	10	0.4902	3.06	0.1462	not significant
Pure Error	0.6408	4	0.1602			
Cor Total	11.88	19				

Table SI4 Linear regression for enzyme production from MBT003

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Model	7.12	5	1.42	4.05	0.0176	significant
A-substrate con.	0.9074	1	0.9074	2.58	0.1308	
B-incubation period	0.1080	1	0.1080	0.3068	0.5884	
C-temperature	0.0129	1	0.0129	0.0368	0.8507	
D-inocula size	5.63	1	5.63	16.00	0.0013	
E-pH	0.0375	1	0.0375	0.1064	0.7491	
Residual	4.93	14	0.3522			
Lack of Fit	4.70	10	0.4699	8.11	0.0292	significant
Pure Error	0.2318	4	0.0580			
Cor Total	12.05	19				

Table SI5 Linear regression for enzyme production from MBT004

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Model	8.77	5	1.75	2.96	0.0498	significant
A-pH	0.2284	1	0.2284	0.3860	0.5444	
B-Temperature	0.0151	1	0.0151	0.0256	0.8753	
C-inocula size	7.35	1	7.35	12.42	0.0034	
D-incubation period	0.1257	1	0.1257	0.2124	0.6519	
E-substrate con.	0.6330	1	0.6330	1.07	0.3185	
Residual	8.28	14	0.5917			
Lack of Fit	7.98	10	0.7976	10.34	0.0188	significant
Pure Error	0.3085	4	0.0771			
Cor Total	17.05	19				