Supplementary materials for the article:

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Table SI

Protease, lipase, amylase, cellulase, pectinase and xylanase enzyme indexes (EIs) of 128 strains. EIs were calculated as a mean ratio of opaque zone diameter to colony diameter in mm.

ISOLATE /ENZYME	PROTEASE	LIPASE	AMYLASE	CELLULASE	PECTINASE	XYLANASE
G100K1	$2.92 \pm 0.11^{abcqrstuvwxyz}$	-	-	-	-	-
G100S1	$2.40 \pm 0.03^{abcdefghxyz}$	1.65 ± 0.17^{abuvwxyz}	1.36 ± 0.04^{abxyz}	-	-	-
G100Y1	$3.40 \pm 0.12^{ijklmnopqrstuv}$	6.96 ± 0.54^{b}	2.18 ± 0.08^{lmnopq}	7.02 ± 0.46^{def}	-	-
G100Y2	$3.02 \pm 0.32^{opqrstuvwxy}$	$1.84 \pm 0.07^{abstuvwxyz}$	1.36 ± 0.08^{abxyz}	-	-	-
G100Y3	$2.81 \pm 0.03^{abcderstuvwxyz}$	$3.02 \pm 0.25^{jklmnopqrstu}$	1.61 ± 0.05^{tuvwxyz}	-	-	-
G101K1	1.88 ± 0.12^{ghıjk}	$2.42 \pm 0.18^{abmnopqrstuvwxyz}$	3.17 ± 0.21^{de}	4.55 ± 0.95^{ghıj}	-	-
G101Y1	$2.86 \pm 0.08^{abcdqrstuvwxyz}$	$3.44 \pm 0.29^{ghıjklmno}$	1.67 ± 0.12^{stuvwxy}	-	-	-
G101Y2	-	5.63 ± 0.38^{cd}	-	-	-	-
G101Y3	1.95 ± 0.07^{ghıjk}	$1.90 \pm 0.05^{abstuvwxyz}$	-	-	-	-
G101Y4	$3.25 \pm 0.12^{klmnopqrstuv}$	$2.05 \pm 0.05^{abqrstuvwxyz}$	-	-	-	-
G102K1	1.62 ± 0.03^{ijk}	-	-	-	-	-
G102K2	$2.26 \pm 0.08^{abcdefghıjz}$	7.00 ± 0.68^{b}	-	-	-	-
G102K3	4.07 ± 0.37^{defghı}	-	-	-	3.39 ± 0.15^{cd}	-
G102K4	$2.22 \pm 0.09^{abcdefghk}$	$3.46 \pm 0.21^{ghıjklmno}$	1.41 ± 0.02^{abwxyz}	-	-	1.67 ± 0.01^{ns}
G105K2	-	$2.00 \pm 0.11^{abqrstuvwxyz}$	1.43 ± 0.08^{abvwxyz}	2.42 ± 0.11^{klm}	1.79 ± 0.15^{ghı}	-
G105K3	$3.51 \pm 0.48^{ghıjklmnopqrs}$	-	-	4.46 ± 0.20^{ghıj}	3.92 ± 0.34^{abc}	-

ISOLATE /ENZYME	PROTEASE	LIPASE	AMYLASE	CELLULASE	PECTINASE	XYLANASE
G105S1	-	-	-	-	-	-
G105Y1	7.29 ± 0.71^{a}	$1.87 \pm 0.34^{abstuvwxyz}$	3.03 ± 0.29^{def}	12.75 ± 1.38^{a}	3.81 ± 0.38^{abcd}	-
G106K1	$2.68 \pm 0.06^{abcdefvwxyz}$	-	2.50 ± 0.13^{hijklmn}	-	-	-
G106S1	$3.16 \pm 0.04^{lmnopqrstuvw}$	1.67 ± 0.08^{abuvwxyz}	-	-	-	-
G106S2	$3.72 \pm 0.29^{fghijklmno}$	$2.72 \pm 0.18^{lmnopqrstuvwxyz}$	1.96 ± 0.07^{pqrstu}	-	-	-
G106Y1	$3.81 \pm 0.16^{efghijklm}$	-	-	4.89 ± 0.20^{ghi}	2.24 ± 0.11^{fgh}	-
G107K1	-	$2.41 \pm 0.14^{abmnopqrstuvwxyz}$	-	-	-	-
G107S1	-	$2.80 \pm 0.28^{klmnopqrstuvwxy}$	-	2.70 ± 0.71^{jklm}	-	1.64 ± 0.32^{ns}
G107S2	$3.08 \pm 0.03^{mnopqrstuvwx}$	$1.94 \pm 0.05^{abrstuvwxyz}$	1.19 ± 0.03^{abz}	-	-	-
G107Y1	$2.20 \pm 0.18^{cdefghijk}$	$2.92 \pm 0.38^{jklmnopqrstuvw}$	1.44 ± 0.08^{abvwxyz}	-	-	2.88 ± 0.13^{ns}
G107Y2	$3.26 \pm 0.09^{klmnopqrstuv}$	7.33 ± 0.67^{b}	2.68 ± 0.27^{fghijk}	4.95 ± 0.30^{ghi}	-	-
G108S2	-	$2.56 \pm 0.38^{ablmnopqrstuvwxyz}$	2.27 ± 0.13^{klmnopq}	-	1.46 ± 0.10^{ghi}	-
G111K1	-	$3.63 \pm 0.10^{fghijklmn}$	-	-	-	-
G111K2	$3.10 \pm 0.14^{mnopqrstuvwx}$	$2.35 \pm 0.06^{abmnopqrstuvwxyz}$	1.11 ± 0.01^{b}	-	-	-
G111K3	$3.09 \pm 0.04^{mnopqrstuvwx}$	$2.32 \pm 0.06^{abmnopqrstuvwxyz}$	1.47 ± 0.05^{abvwxyz}	-	-	-
G111S1	-	$2.56 \pm 0.07^{ablmnopqrstuvwxyz}$	2.32 ± 0.16^{jklmnopq}	4.05 ± 0.25^{hijk}	-	-
G112K3	$2.87 \pm 0.16^{abcdqrstuvwxyz}$	1.26 ± 0.02^{ab}	-	-	-	-
G113K1	$3.17 \pm 0.28^{lmnopqrstuvw}$	$2.12 \pm 0.03^{abopqrstuvwxyz}$	1.36 ± 0.02^{abxyz}	-	-	-
G113K2	2.13 ± 0.02^{efghijk}	1.60 ± 0.05^{abvwxyz}	-	-	-	-
G113S1	4.02 ± 0.20^{defghij}	$2.96 \pm 0.56^{jklmnopqrstuvw}$	2.42 ± 0.09^{ijklmnop}	-	-	-
G113S2	$3.27 \pm 0.08^{klmnopqrstuv}$	$2.23 \pm 0.14^{abopqrstuvwxyz}$	2.54 ± 0.09^{ghijklmn}	-	-	-
G113S2T	-	$1.99 \pm 0.25^{abrstuvwxyz}$	-	-	-	-
G113Y2	$3.33 \pm 0.15^{jklmnopqrstuv}$	$2.49 \pm 0.17^{abmnopqrstuvwxyz}$	1.54 ± 0.10^{abuvwxyz}	-	-	-
G113Y3	5.12 ± 0.07^{b}	$3.15 \pm 0.13^{hijklmnopqrs}$	4.70 ± 0.17^{ab}	9.77 ± 0.42^{bc}	3.48 ± 0.29^{bcd}	1.75 ± 0.25^{ns}

ISOLATE /ENZYME	PROTEASE	LIPASE	AMYLASE	CELLULASE	PECTINASE	XYLANASE
G114S1T	$3.78 \pm 0.17^{efghıjklmn}$	-	-	9.53 ± 0.64^{bc}	3.46 ± 0.38^{bcd}	-
G114Y1	4.41 ± 0.37^{cdef}	$2.71 \pm 0.28^{lmnopqrstuvwxyz}$	-	10.00 ± 0.68^{bc}	3.78 ± 0.22^{abcd}	-
G114Y2	-	-	-	-	-	-
G114Y2T	-	-	-	-	-	-
G114Y3	-	-	-	6.15 ± 1.35^{efg}	2.94 ± 0.11^{def}	-
G115K1T	2.19 ± 0.67^{defghıjk}	$2.64 \pm 0.12^{lmnopqrstuvwxyz}$	-	-	-	-
G116K1T	4.68 ± 0.25^{bcd}	$1.91 \pm 0.18^{abstuvwxyz}$	-	-	-	-
G116S1	-	-	-	-	-	-
G116S1T	1.51 ± 0.13^{k}	1.36 ± 0.10^{abz}	-	-	-	-
G116S2	3.97 ± 0.22^{defghıjk}	-	-	-	3.48 ± 0.13^{bcd}	-
G116S2T	4.15 ± 0.22^{cdefgh}	-	-	8.29 ± 0.26^{cd}	3.07 ± 0.14^{cde}	-
G117K1	-	$2.67 \pm 0.28^{lmnopqrstuvwxyz}$	1.86 ± 0.12^{qrstuvw}	-	-	-
G117Y1T	$3.22 \pm 0.13^{lmnopqrstuvw}$	6.32 ± 1.78^{cb}	2.81 ± 0.01^{defghı}	2.46 ± 0.12^{klm}	-	1.90 ± 0.27^{ns}
G118K1	$3.46 \pm 0.11^{hıjklmnopqrstu}$	$2.68 \pm 0.08^{lmnopqrstuvwxyz}$	1.85 ± 0.06^{qrstuvw}	-	1.41 ± 0.01^{hı}	-
G118K1T	-	$1.82 \pm 0.12^{abstuvwxyz}$	1.59 ± 0.25^{atuvwxyz}	8.48 ± 0.62^{cd}	-	-
G118S1	4.38 ± 0.40^{cdef}	3.86 ± 0.65^{efghıjkl}	2.87 ± 0.34^{defghı}	-	-	-
G118S1T	-	-	-	-	-	-
G118S2T	4.22 ± 0.16^{cdefg}	4.46 ± 0.22^{defg}	1.69 ± 0.08^{rstuvwx}	3.46 ± 0.19^{ıjkl}	-	2.65 ± 0.41^{ns}
G118Y1T	1.94 ± 0.13^{ghıjk}	$2.62 \pm 0.22^{almnopqrstuvwxyz}$	1.16 ± 0.02^{abz}	4.01 ± 0.54^{hıjk}	-	-
G119S1	2.06 ± 0.23^{fghıjk}	1.35 ± 0.07^{abz}	-	-	-	-
G119Y1T	-	4.37 ± 0.15^{efgh}	1.29 ± 0.04^{abxyz}	7.50 ± 0.00^{de}	-	-
G119Y2T	-	4.37 ± 0.15^{efgh}	2.59 ± 0.25^{ghıjklm}	2.08 ± 0.21^{lm}	-	-
G120S1	$2.50 \pm 0.12^{abcdefgwxyz}$	-	1.60 ± 0.04^{tuvwxyz}	-	-	-
G120S2	-	-	-	4.20 ± 0.34^{hıjk}	3.07 ± 0.14^{cde}	-

ISOLATE /ENZYME	PROTEASE	LIPASE	AMYLASE	CELLULASE	PECTINASE	XYLANASE
G120S3	$2.93 \pm 0.11^{abqstuwxyz}$	1.53 ± 0.16^{abxyz}	-	-	-	-
G42K2	$3.57 \pm 0.20^{gijklmnopq}$	4.89 ± 0.22^{def}	2.68 ± 0.09^{fghijk}	2.66 ± 0.04^{jklm}	1.76 ± 0.14^{ghi}	-
G68K2	-	3.61 ± 0.94^{fghijklm}	5.00 ± 0.00^{a}	-	-	-
G68K3	-	4.59 ± 0.34^{defg}	4.02 ± 0.19^{c}	5.10 ± 0.33^{ghi}	-	-
G69S1	-	5.01 ± 0.32^{de}	3.95 ± 0.25^{c}	3.65 ± 0.37^{hijkl}	-	-
G69S2	-	4.36 ± 0.66^{efgh}	4.79 ± 0.13^{ab}	1.93 ± 0.07^{lm}	-	-
G70K2	$2.73 \pm 0.34^{abcdefuwxyz}$	7.24 ± 0.78^{b}	2.69 ± 0.04^{fghijk}	4.07 ± 0.13^{hijk}	2.34 ± 0.18^{efg}	-
G71K1	1.64 ± 0.05^{ijk}	$1.84 \pm 0.33^{abstuvwxyz}$	-	-	-	-
G72S1	4.01 ± 0.19^{defghij}	$2.38 \pm 0.03^{abmnopqrstuvwxyz}$	1.25 ± 0.01^{abxyz}	-	-	-
G75K1	3.85 ± 0.18^{efghijkl}	9.38 ± 0.31^{a}	3.80 ± 0.17^{c}	-	-	-
G75K2	-	-	4.49 ± 0.05^{b}	3.42 ± 0.26^{ijkl}	-	-
G79K1	$3.28 \pm 0.25^{klmnopqrstuv}$	-	2.44 ± 0.04^{ijklmno}	-	-	-
G79K2	-	1.24 ± 0.02^{b}	-	-	-	-
G79K3	3.97 ± 0.18^{defghijk}	-	1.89 ± 0.04^{qrstuv}	-	2.10 ± 0.10^{ghi}	-
G79S1	$2.75 \pm 0.03^{abcdeftuvwxyz}$	-	-	-	-	-
G79Y1	1.85 ± 0.09^{ghijk}	$3.04 \pm 0.17^{ijklmnopqrst}$	2.25 ± 0.15^{klmnopq}	-	-	-
G79Y2	4.13 ± 0.14^{defgh}	$2.67 \pm 0.25^{lmnopqrstuvwxyz}$	1.67 ± 0.03^{stuvwxy}	3.35 ± 0.12^{ijklm}	1.63 ± 0.03^{ghi}	-
G79Y3	$2.80 \pm 0.14^{abcdestuvwxyz}$	-	-	-	-	-
G79Y4	4.48 ± 0.22^{cde}	-	2.95 ± 0.08^{defgh}	-	-	-
G80K1	$2.30 \pm 0.14^{abcdefghiyz}$	4.09 ± 0.26^{efghijk}	1.40 ± 0.08^{abwxyz}	2.79 ± 0.09^{jklm}	-	-
G80K3	4.03 ± 0.17^{defghij}	-	3.05 ± 0.13^{def}	-	4.44 ± 0.90^{a}	-
G80S1	-	-	3.80 ± 0.08^{c}	7.27 ± 1.05^{de}	-	-
G81K1	1.62 ± 0.03^{ijk}	1.51 ± 0.04^{abxyz}	-	-	-	-
G81K2	-	-	1.21 ± 0.05^{abyz}	3.57 ± 0.05^{ijkl}	-	-

ISOLATE /ENZYME	PROTEASE	LIPASE	AMYLASE	CELLULASE	PECTINASE	XYLANASE
G81Y1	-	$2.07 \pm 0.14^{abpqrstuvwxyz}$	2.99 ± 0.06^{defg}	5.51 ± 0.58^{fgh}	1.57 ± 0.14^{ghı}	-
G82K2	-	-	2.22 ± 0.08^{lmnopq}	-	-	-
G82S1	$3.34 \pm 0.04^{jklmnopqrstuv}$	$2.75 \pm 0.15^{lmnopqrstuvwxy}$	-	-	-	-
G82S2	$3.31 \pm 0.03^{jklmnopqrstuv}$	$2.62 \pm 0.07^{almnopqrstuvwxyz}$	1.51 ± 0.23^{abuvwxyz}	-	1.91 ± 0.09^{ghı}	-
G82Y1	1.86 ± 0.16^{ghıjk}	$2.35 \pm 0.24^{abmnopqrstuvwxyz}$	-	-	-	-
G83K1	$3.55 \pm 0.16^{ghıjklmnopqr}$	$2.19 \pm 0.20^{abopqrstuvwxyz}$	1.37 ± 0.02^{abxyz}	-	-	-
G83S1	1.65 ± 0.04^{ıjk}	-	-	-	-	-
G83S2	$3.05 \pm 0.24^{nopqrstuvwx}$	$2.29 \pm 0.10^{abnopqrstuvwxyz}$	1.13 ± 0.02^{ab}	-	-	-
G83S3	$2.85 \pm 0.05^{abcdqrstuvwxyz}$	3.67 ± 0.15^{fghıjklm}	3.91 ± 0.37^{c}	4.40 ± 0.10^{ghıj}	2.05 ± 0.05^{ghı}	-
G84K1	-	1.49 ± 0.03^{abxyz}	2.03 ± 0.13^{opqrst}	-	-	-
G84Y1	1.54 ± 0.02^{jk}	-	-	-	-	-
G85K2	$3.49 \pm 0.04^{hıjklmnopqrst}$	-	-	-	-	-
G85K3	$2.94 \pm 0.16^{aqrstuvwxyz}$	4.32 ± 0.16^{efghı}	2.76 ± 0.20^{efghıj}	-	-	-
G88K1	$3.78 \pm 0.06^{efghıjklmn}$	$1.90 \pm 0.11^{abstuvwxyz}$	-	-	-	2.88 ± 0.38^{ns}
G88K2	-	4.19 ± 0.21^{efghıj}	2.11 ± 0.09^{nopqrs}	-	1.27 ± 0.03^{ı}	2.04 ± 0.66^{ns}
G88S1	$2.22 \pm 0.10^{bcdefghıjk}$	5.05 ± 0.83^{de}	-	-	4.25 ± 0.14^{ab}	-
G88Y1	1.95 ± 0.13^{ghıjk}	1.54 ± 0.06^{abxyz}	-	-	-	-
G90S1	$2.94 \pm 0.08^{abqrstuvwxyz}$	6.79 ± 2.01^{b}	3.23 ± 0.09^{d}	5.02 ± 0.27^{ghı}	-	-
G90Y1	-	$3.30 \pm 0.23^{ghıjklmnopqr}$	2.29 ± 0.20^{klmnopq}	-	-	-
G90Y2	$3.46 \pm 0.15^{hıjklmnopqrstu}$	9.80 ± 0.20^{a}	2.14 ± 0.03^{mnopq}	6.10 ± 0.16^{efg}	1.73 ± 0.03^{ghı}	-
G91K1	-	$2.04 \pm 0.05^{abqrstuvwxyz}$	-	-	-	-
G91S1	$2.78 \pm 0.00^{abcdestuvwxyz}$	$2.31 \pm 0.16^{abnopqrstuvwxyz}$	2.13 ± 0.13^{nopqr}	3.39 ± 0.09^{ıjklm}	-	-
G91S2	-	1.49 ± 0.06^{abxyz}	-	4.10 ± 0.06^{hıjk}	-	-
G91S3	4.82 ± 0.08^{bc}	$2.20 \pm 0.36^{abopqrstuvwxyz}$	2.00 ± 0.07^{opqrst}	10.83 ± 1.46^{b}	3.32 ± 0.15^{cd}	-

ISOLATE /ENZYME	PROTEASE	LIPASE	AMYLASE	CELLULASE	PECTINASE	XYLANASE
G91Y1	-	-	-	-	-	-
G91Y2	1.74 ± 0.10^{hijk}	1.35 ± 0.02^{abz}	-	-	-	-
G92S1	$2.83 \pm 0.02^{abcdeqrstuvwxyz}$	$1.93 \pm 0.23^{abrstuvwxyz}$	-	-	-	-
G92S2	-	-	3.04 ± 0.06^{def}	-	-	-
G93Y1	-	-	-	-	1.67 ± 0.19^{ghı}	-
G95S1	-	$3.41 \pm 0.07^{ghıjklmnop}$	2.77 ± 0.20^{efghıj}	-	1.67 ± 0.08^{ghı}	-
G95Y1	$3.70 \pm 0.75^{fghıjklmnop}$	$3.43 \pm 0.11^{ghıjklmnop}$	1.32 ± 0.11^{abxyz}	3.29 ± 0.35^{ıjklm}	-	-
G95Y2	-	$2.83 \pm 0.24^{klmnopqrstuvwx}$	2.79 ± 0.22^{defghı}	-	-	-
G96Y1	4.33 ± 0.15^{cdef}	$2.97 \pm 0.22^{jklmnopqrstuv}$	2.64 ± 0.12^{fghıjkl}	-	-	-
G96Y2	-	1.60 ± 0.15^{abwxyz}	-	-	-	1.40 ± 0.15^{ns}
G96Y3	$2.97 \pm 0.07^{pqrstuvwxyz}$	$2.01 \pm 0.07^{abqrstuvwxyz}$	1.37 ± 0.01^{abxyz}	-	-	1.77 ± 0.19^{ns}
G99K1	-	$3.36 \pm 0.18^{ghıjklmnopq}$	-	1.54 ± 0.04^{m}	-	-
G99K2	-	$1.91 \pm 0.00^{abstuvwxyz}$	-	-	-	-
G99K3	-	$1.78 \pm 0.08^{abstuvwxyz}$	-	2.80 ± 0.00^{jklm}	-	-
G99Y1	$2.74 \pm 0.06^{abcdefuvwxyz}$	$1.69 \pm 0.03^{abtuvwxyz}$	-	-	-	-
G99Y2	-	1.44 ± 0.04^{abyz}	-	-	-	-

Means of four replicates (Mean ± Std. Errors). Values within a column followed by different lowercase letters are significantly different ($p < 0.05$). ns – not significant