

S5 Table. Activity of cell-bound and freely-released enzymes, and total enzymatic activity of strains of genus *Pseudomonas*. Data represent means and standard deviations of the total activity of three replicates. Abbreviations of enzymes: **bG**: β -glucosidase; **Pho**: acid phosphatase; **Lip**: lipase; **bM**: β -mannosidase; **aA**: α -arabinosidase; **bX**: β -xylosidase; **bGal**: β -galactosidase; **CBH**: cellobiohydrolase; **aG**: α -glucosidase; **ChTN**: chitinase; **aGal**: α -galactosidase; **bGlu**: β -glucuronidase. A ‘-’ indicates values below detection limit.

Strain:	p1			Strain:	p2			Strain:	p3		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	327 ± 4	75	25	bG	-	-	-	bG	302 ± 3	53	47
Pho	7242 ± 108	58	42	Pho	4970 ± 149	97	3	Pho	5750 ± 88	52	48
Lip	7880 ± 105	68	32	Lip	8213 ± 81	64	36	Lip	8846 ± 100	67	33
bM	-	-	-	bM	-	-	-	bM	-	-	-
aA	-	-	-	aA	-	-	-	aA	-	-	-
bX	-	-	-	bX	-	-	-	bX	-	-	-
bGal	-	-	-	bGal	-	-	-	bGal	-	-	-
CBH	-	-	-	CBH	-	-	-	CBH	-	-	-
aG	-	-	-	aG	-	-	-	aG	-	-	-
ChTN	-	-	-	ChTN	-	-	-	ChTN	-	-	-
aGal	-	-	-	aGal	15 ± 1	-	100.00	aGal	-	-	-
bGlu	-	-	-	bGlu	-	-	-	bGlu	-	-	-
	Enzymes produced (%)		25		Enzymes produced (%)		25		Enzymes produced (%)		25
Strain:	p4			Strain:	p7			Strain:	p9		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	125 ± 4	11	89	bG	-	-	-	bG	94 ± 6	61	39
Pho	2297 ± 65	17	83	Pho	1647 ± 77	94	6	Pho	3521 ± 157	65	35
Lip	2938 ± 278	32	68	Lip	8681 ± 117	58	42	Lip	9614 ± 141	68	32
bM	-	-	-	bM	-	-	-	bM	17 ± 3	-	100
aA	-	-	-	aA	-	-	-	aA	14 ± 1	-	100
bX	-	-	-	bX	-	-	-	bX	16 ± 3	-	100
bGal	-	-	-	bGal	-	-	-	bGal	13 ± 3	-	100
CBH	-	-	-	CBH	-	-	-	CBH	13 ± 1	-	100
aG	-	-	-	aG	-	-	-	aG	20 ± 3	-	100
ChTN	-	-	-	ChTN	-	-	-	ChTN	-	-	-
aGal	760 ± 22	-	100	aGal	-	-	-	aGal	22 ± 1	-	100
bGlu	-	-	-	bGlu	-	-	-	bGlu	17 ± 2	-	100
	Enzymes produced (%)		33.3		Enzymes produced (%)		16.7		Enzymes produced (%)		91.7

Strain:	p10			Strain:	p11			Strain:	p12		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	46 ± 2	100	-	bG	160 ± 4	56	44	bG	132 ± 2	58	42
Pho	6566 ± 138	58	42	Pho	6440 ± 94	37	63	Pho	5134 ± 148	40	60
Lip	10838 ± 355	53	47	Lip	10667 ± 361	53	47	Lip	8715 ± 108	57	43
bM	-	-	-	bM	-	-	-	bM	-	-	-
aA	-	-	-	aA	-	-	-	aA	-	-	-
bX	-	-	-	bX	-	-	-	bX	-	-	-
bGal	-	-	-	bGal	-	-	-	bGal	-	-	-
CBH	-	-	-	CBH	-	-	-	CBH	-	-	-
aG	-	-	-	aG	-	-	-	aG	-	-	-
ChTN	-	-	-	ChTN	-	-	-	ChTN	-	-	-
aGal	-	-	-	aGal	-	-	-	aGal	-	-	-
bGlu	-	-	-	bGlu	-	-	-	bGlu	-	-	-
	Enzymes produced (%)		25		Enzymes produced (%)		25		Enzymes produced (%)		25
Strain:	p13			Strain:	p14			Strain:	p15		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	-	-	-	bG	51 ± 3	100	-	bG	141 ± 5	74	26
Pho	276 ± 28	89	11	Pho	6683 ± 215	61	39	Pho	4375 ± 199	78	22
Lip	7327 ± 522	75	25	Lip	10544 ± 617	55	45	Lip	8101 ± 529	75	25
bM	-	-	-	bM	-	-	-	bM	-	-	-
aA	-	-	-	aA	-	-	-	aA	-	-	-
bX	-	-	-	bX	-	-	-	bX	-	-	-
bGal	-	-	-	bGal	-	-	-	bGal	-	-	-
CBH	-	-	-	CBH	-	-	-	CBH	-	-	-
aG	-	-	-	aG	-	-	-	aG	-	-	-
ChTN	-	-	-	ChTN	-	-	-	ChTN	-	-	-
aGal	-	-	-	aGal	-	-	-	aGal	-	-	-
bGlu	-	-	-	bGlu	-	-	-	bGlu	-	-	-
	Enzymes produced (%)		16.7		Enzymes produced (%)		25		Enzymes produced (%)		25

Strain:	p16			Strain:	p17			Strain:	p18		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	289 ± 9	49	51	bG	-	-	-	bG	153 ± 45	83	17
Pho	7558 ± 281	55	45	Pho	261 ± 17	74	26	Pho	7055 ± 355	76	24
Lip	9078 ± 509	68	32	Lip	10518 ± 273	55	45	Lip	7990 ± 108	82	18
bM	-	-	-	bM	-	-	-	bM	10 ± 5	-	100
aA	-	-	-	aA	-	-	-	aA	15 ± 4	-	100
bX	-	-	-	bX	19. ± 12	-	100	bX	-	-	-
bGal	-	-	-	bGal	-	-	-	bGal	11 ± 1	-	100
CBH	-	-	-	CBH	-	-	-	CBH	-	-	-
aG	-	-	-	aG	20 ± 20	-	100	aG	15 ± 1	-	100
ChTN	-	-	-	ChTN	-	-	-	ChTN	-	-	-
aGal	-	-	-	aGal	-	-	-	aGal	18 ± 2	-	100
bGlu	-	-	-	bGlu	-	-	-	bGlu	11 ± 1	-	100
	Enzymes produced (%)		25		Enzymes produced (%)		33.3		Enzymes produced (%)		75
Strain:	p19			Strain:	p20			Strain:	p23		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	-	-	-	bG	1306 ± 27	71	29	bG	1449 ± 26	84	16
Pho	1862 ± 55	96	4	Pho	8874 ± 127	63	37	Pho	5676 ± 37	92	8
Lip	8333 ± 157	62	38	Lip	8768 ± 325	67	33	Lip	7270 ± 431	72	28
bM	-	-	-	bM	41 ± 5	-	100	bM	150 ± 8	8	92
aA	-	-	-	aA	39 ± 2	-	100	aA	210 ± 9	-	100
bX	-	-	-	bX	91 ± 6	42	58	bX	151 ± 15	-	100
bGal	-	-	-	bGal	36 ± 3	-	100	bGal	164 ± 0	-	100
CBH	-	-	-	CBH	41 ± 3	-	100	CBH	167 ± 25	18	82
aG	-	-	-	aG	57 ± 4	18	82	aG	154 ± 28	-	100
ChTN	-	-	-	ChTN	39 ± 1	-	100	ChTN	148 ± 23	-	100
aGal	-	-	-	aGal	43 ± 1	-	100	aGal	169 ± 7	-	100
bGlu	-	-	-	bGlu	42 ± 1	-	100	bGlu	130 ± 11	-	100
	Enzymes produced (%)		16.7		Enzymes produced (%)		100		Enzymes produced (%)		100

Strain:	p24			Strain:	p25			Strain:	p30		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	602 ± 31	67	33	bG	-	-	-	bG	-	-	-
Pho	8586 ± 231	67	33	Pho	175 ± 7	77	23	Pho	210 ± 12	83	17
Lip	10074 ± 104	66	34	Lip	9245 ± 179	53	47	Lip	9038 ± 166	52	48
bM	-	-	-	bM	-	-	-	bM	-	-	-
aA	-	-	-	aA	-	-	-	aA	-	-	-
bX	39 ± 3	57	43	bX	-	-	-	bX	-	-	-
bGal	-	-	-	bGal	-	-	-	bGal	-	-	-
CBH	-	-	-	CBH	-	-	-	CBH	-	-	-
aG	11 ± 3	-	100	aG	-	-	-	aG	-	-	-
ChTN	-	-	-	ChTN	-	-	-	ChTN	-	-	-
aGal	-	-	-	aGal	-	-	-	aGal	-	-	-
bGlu	-	-	-	bGlu	-	-	-	bGlu	-	-	-
	Enzymes produced (%)		41.7		Enzymes produced (%)		16.7		Enzymes produced (%)		16.7

Strain:	p31			Strain:	p33			Strain:	p34		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	-	-	-	bG	-	-	-	bG	194 ± 9	81	19
Pho	234 ± 6	75	25	Pho	262 ± 7	76	24	Pho	5852 ± 134	87	13
Lip	10589 ± 350	46	54	Lip	8217 ± 106	66	34	Lip	8680 ± 65	75	25
bM	-	-	-	bM	-	-	-	bM	21 ± 3	-	100
aA	-	-	-	aA	-	-	-	aA	16 ± 3	-	100
bX	-	-	-	bX	-	-	-	bX	20 ± 4	-	100
bGal	-	-	-	bGal	-	-	-	bGal	19 ± 1	-	100
CBH	-	-	-	CBH	-	-	-	CBH	14 ± 1	-	100
aG	-	-	-	aG	-	-	-	aG	23 ± 2	-	100
ChTN	-	-	-	ChTN	-	-	-	ChTN	14 ± 3	-	100
aGal	-	-	-	aGal	-	-	-	aGal	25 ± 6	-	100
bGlu	-	-	-	bGlu	-	-	-	bGlu	21 ± 5	-	100
	Enzymes produced (%)		16.7		Enzymes produced (%)		16.7		Enzymes produced (%)		100

Strain:	p36			Strain:	p37			Strain:	p42		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	-	-	-	bG	-	-	-	bG	-	-	-
Pho	274 ± 11	82	18	Pho	209 ± 16	82	18	Pho	287 ± 16	90	10
Lip	9420 ± 130	56	44	Lip	8519 ± 485	55	45	Lip	8321 ± 176	69	31
bM	-	-	-	bM	-	-	-	bM	-	-	-
aA	-	-	-	aA	-	-	-	aA	-	-	-
bX	-	-	-	bX	-	-	-	bX	-	-	-
bGal	-	-	-	bGal	-	-	-	bGal	-	-	-
CBH	-	-	-	CBH	-	-	-	CBH	-	-	-
aG	-	-	-	aG	-	-	-	aG	-	-	-
ChTN	-	-	-	ChTN	-	-	-	ChTN	-	-	-
aGal	-	-	-	aGal	-	-	-	aGal	-	-	-
bGlu	-	-	-	bGlu	-	-	-	bGlu	-	-	-
	Enzymes produced (%)		16.7		Enzymes produced (%)		16.7		Enzymes produced (%)		16.7
Strain:	p43			Strain:	p44			Strain:	p45		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	-	-	-	bG	-	-	-	bG	-	-	-
Pho	430 ± 27	88	12	Pho	313 ± 15	74	26	Pho	343 ± 19	75	25
Lip	10696 ± 152	56	44	Lip	10587 ± 360	49	51	Lip	8891 ± 274	66	34
bM	-	-	-	bM	-	-	-	bM	-	-	-
aA	-	-	-	aA	-	-	-	aA	-	-	-
bX	-	-	-	bX	-	-	-	bX	-	-	-
bGal	-	-	-	bGal	-	-	-	bGal	-	-	-
CBH	-	-	-	CBH	-	-	-	CBH	-	-	-
aG	-	-	-	aG	-	-	-	aG	-	-	-
ChTN	-	-	-	ChTN	-	-	-	ChTN	-	-	-
aGal	-	-	-	aGal	-	-	-	aGal	-	-	-
bGlu	-	-	-	bGlu	-	-	-	bGlu	-	-	-
	Enzymes produced (%)		16.7		Enzymes produced (%)		16.7		Enzymes produced (%)		16.7

Strain:	p47			Strain:	p48			Strain:	p49		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	226 ± 9	77	23	bG	-	-	-	bG	99 ± 3	47	53
Pho	6384 ± 132	63	37	Pho	327 ± 17	77	23	Pho	6534 ± 72	76	24
Lip	8911 ± 107	66	34	Lip	11059 ± 232	46	54	Lip	9598 ± 175	67	33
bM	-	-	-	bM	-	-	-	bM	41 ± 9	-	100
aA	-	-	-	aA	-	-	-	aA	28 ± 2	-	100
bX	-	-	-	bX	-	-	-	bX	40 ± 2	-	100
bGal	-	-	-	bGal	-	-	-	bGal	32 ± 4	-	100
CBH	-	-	-	CBH	-	-	-	CBH	39 ± 5	-	100
aG	-	-	-	aG	-	-	-	aG	32 ± 4	-	100
ChTN	-	-	-	ChTN	-	-	-	ChTN	29 ± 4	-	100
aGal	-	-	-	aGal	-	-	-	aGal	30 ± 7	-	100
bGlu	-	-	-	bGlu	-	-	-	bGlu	39 ± 2	-	100
	Enzymes produced (%)		25		Enzymes produced (%)		16.7		Enzymes produced (%)		100

Strain:	p50			Strain:	p51			Strain:	p52		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	335 ± 9	50	50	bG	59 ± 5	100	-	bG	113 ± 11	100	-
Pho	8027 ± 253	63	37	Pho	6769 ± 128	76	24	Pho	7756 ± 174	72	28
Lip	8534 ± 169	71	29	Lip	6985 ± 47	73	27	Lip	7292 ± 193	80	20
bM	-	-	-	bM	-	-	-	bM	-	-	-
aA	-	-	-	aA	-	-	-	aA	-	-	-
bX	-	-	-	bX	-	-	-	bX	-	-	-
bGal	-	-	-	bGal	-	-	-	bGal	-	-	-
CBH	-	-	-	CBH	-	-	-	CBH	-	-	-
aG	-	-	-	aG	-	-	-	aG	-	-	-
ChTN	-	-	-	ChTN	-	-	-	ChTN	-	-	-
aGal	-	-	-	aGal	-	-	-	aGal	-	-	-
bGlu	-	-	-	bGlu	-	-	-	bGlu	-	-	-
	Enzymes produced (%)		25		Enzymes produced (%)		25		Enzymes produced (%)		25

Strain:	p53			Strain:	p54			Strain:	p55		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	-	-	-	bG	21 ± 3	-	100	bG	-	-	-
Pho	4719 ± 217	98	2	Pho	5460 ± 106	98	2	Pho	2468 ± 332	99	1
Lip	8094 ± 365	66	34	Lip	7650 ± 241	80	20	Lip	7899 ± 468	66	34
bM	-	-	-	bM	29 ± 3	-	100	bM	-	-	-
aA	-	-	-	aA	21 ± 3	-	100	aA	-	-	-
bX	-	-	-	bX	25 ± 1	-	100	bX	-	-	-
bGal	-	-	-	bGal	22 ± 3	-	100	bGal	-	-	-
CBH	-	-	-	CBH	20 ± 3	-	100	CBH	-	-	-
aG	-	-	-	aG	31 ± 2	-	100	aG	-	-	-
ChTN	-	-	-	ChTN	23 ± 2	-	100	ChTN	-	-	-
aGal	-	-	-	aGal	31 ± 3	-	100	aGal	-	-	-
bGlu	-	-	-	bGlu	28 ± 4	-	100	bGlu	-	-	-
	Enzymes produced (%)		16.7		Enzymes produced (%)		100		Enzymes produced (%)		16.7
Strain:	p56			Strain:	p57			Strain:	p60		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	-	-	-	bG	46 ± 7	63	37	bG	-	-	-
Pho	253 ± 16	90	10	Pho	4855 ± 154	42	58	Pho	5468 ± 258	98	2
Lip	9641 ± 616	51	49	Lip	7765 ± 86	50	50	Lip	6737 ± 697	77	23
bM	-	-	-	bM	-	-	-	bM	-	-	-
aA	-	-	-	aA	-	-	-	aA	11 ± 4	-	100
bX	-	-	-	bX	-	-	-	bX	-	-	-
bGal	-	-	-	bGal	-	-	-	bGal	-	-	-
CBH	-	-	-	CBH	-	-	-	CBH	-	-	-
aG	-	-	-	aG	-	-	-	aG	-	-	-
ChTN	-	-	-	ChTN	-	-	-	ChTN	-	-	-
aGal	-	-	-	aGal	-	-	-	aGal	-	-	-
bGlu	-	-	-	bGlu	-	-	-	bGlu	-	-	-
	Enzymes produced (%)		16.7		Enzymes produced (%)		25		Enzymes produced (%)		25

Strain:	p61			Strain:	p62		
	Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)		Total activity (nM min ⁻¹ mL ⁻¹)	Bound (%)	Free (%)
bG	-	-	-	bG	55 ± 1	100	-
Pho	3688 ± 199	99	1	Pho	5583 ± 90	69	31
Lip	9970 ± 641	56	44	Lip	7709 ± 345	75	25
bM	-	-	-	bM	-	-	-
aA	-	-	-	aA	-	-	-
bX	-	-	-	bX	-	-	-
bGal	-	-	-	bGal	-	-	-
CBH	-	-	-	CBH	-	-	-
aG	-	-	-	aG	-	-	-
ChTN	-	-	-	ChTN	-	-	-
aGal	-	-	-	aGal	-	-	-
bGlu	-	-	-	bGlu	-	-	-
	Enzymes produced (%)		16.7		Enzymes produced (%)		25