Supplemental information 5 Composition of PHA produced by *P. putida* under various growth conditions

Monomers	Abbrev	Number of carbons	Molar Mass	Unsaturated
3-hydroxybutyrate	HB	4	104.105	
3-hydroxyhexanoate	HHx	6	133.166	
3-hydroxyoctanoate	HO	8	162.227	
3-hydroxydecanoate	HD	10	191.288	
3-hydroxydodecanoate	HDD	12	220.349	218.333
3-hydroxytetradecanoate	HTD	14	249.41	247.394

Pseudomonas putida

B-oxidation pathway

			PHA Monomer composition (mol%)							
Strain	**Carbon source**	**PHA content (wt%)**	HHx	HO	HD	HDD	HTD	HDD 12:1	HTD 14:1	**Reference**
KT2442 (wt)										
KTOY06 (fadBA-)	6 g/L tetradecanoic acid	45.99	2.2	11.1	21.6	16.1	49.1	-	-	1
	10 g/L 60hrs	60.97	2.6	17.8	23.7	15.7	40.2	-	-	
	12 g/L 48hrs	57.7	2.2	15.1	26.1	17.6	39	-	-	
	12 g/L 60hrs	84.47	2	14	23.6	17.4	43.1	-	-	
	12 g/L 72hrs	67.49	2.8	17.9	24.8	18.6	36	-	-	
	14 g/L 60hrs	62.86	2.9	18.7	27.4	19.6	31.3	-	-	
KT2442 (wt)	12 g/L dodecanoate (on	50.5	14.9	51.6	26	7.5	-	-	-	2
KTOY04 (fadB2x, fadAx)		56.7	14.2	51.9	26.5	7.4	-	-	-	
KTOY06 (fadBA-)		69.9	4.4	31.9	28	35.7	-	-	-	
KTOY08 (FadB2x,fadB,fadAx fadA)		19.8	4.7	34.6	32.4	28.3	-	-	-	
KT2442	C8 (one-step)	51.9	18.8	81.2	0	0	-	-	-	
	C10	38	16.6	54.9	28.5	0	-	-	-	
	C12	50.5	14.9	51.6	26	7.5	-	-	-	
KTOY06 (fadBA-)	C8	6.8	5.5	94.5	0	0	-	-	-	
	C10	35.8	5.4	52.5	42.1	0	-	-	-	
	C12	69.9	4.4	31.9	28	35.7	-	-	-	
KT2442	C8 (two-step)	20.6	20.6	79.4	0	0	-	-	-	
	C10	15.6	16.5	53.9	29.7	0	-	-	-	
	C12	43.7	12.9	39.1	39.5	8.5	-	-	-	
KTOY06 (fadBA-)	C8	5.3	7.2	92.8	0	0	-	-	-	
	C10	76.1	5	47.2	47.8	0	-	-	-	
	C12	84.3	3	22.9	33.2	40.9	-	-	-	

						Wt%				
KT2442 (wt)	20g/L Glucose	16.9	tr	6.9	74.3	7.7	tr	8.8	1.6	3
	20g/L Fructose	24.5	0.5	12.6	70.8	5.7	0.3	8.5	1.6	
	40g/L Glycerol	22	1.7	21.4	63.6	3.8	0.1	8.6	0.8	
	20g/L Decanoate	27.6	5.3	52.3	42.3	-	-	-	-	
P. putida						wt%				
S12	Styrene	14	2	26	72	-	-	-	-	4
	Phenylacetic acid	12	2	25	73	-	-	-	-	
CA-1	Styrene	8	1	22	77	-	-	-	-	
	Phenylacetic acid	4	0	19	81	-	-	-	-	
F6	Phenylacetic acid	1.4	0	8	92	-	-	-	-	
H4	Phenylacetic acid	3	0	16	84	-	-	-	-	
D5	Phenylacetic acid	1.8	3	26	71	-	-	-	-	
P. fluorescens						-	-	-	-	
B2	Phenylacetic acid	1.5	0	17	83	-	-	-	-	
B3	Phenylacetic acid	12	3	26	71	-	-	-	-	
P. jessenii										
C8	Phenylacetic acid	1.7	6	20	74	-	-	-	-	

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