

Supplementary Materials: Enzymatic degradation of poly(ethylene furanoate) powders and amorphous films

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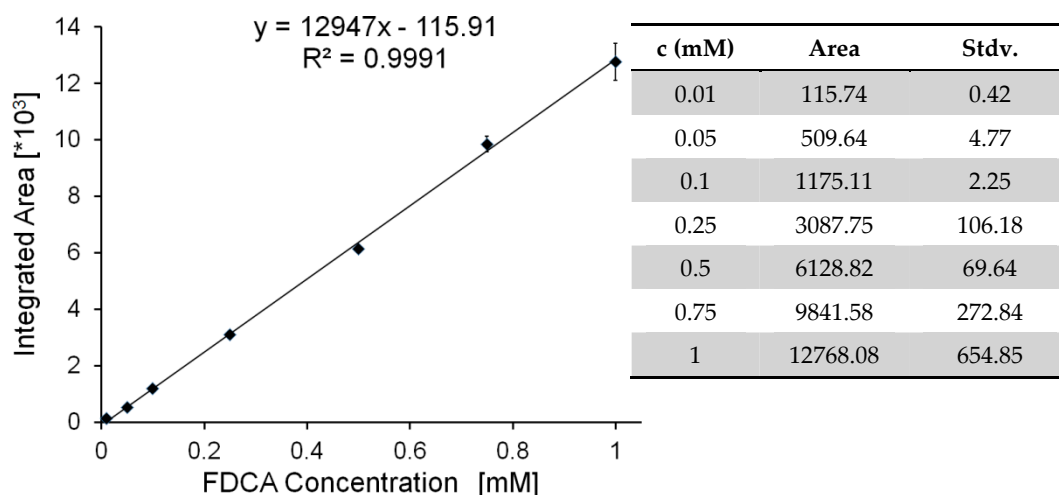


Figure S1: FDCA calibration used for the analysis of molecules released from PEF by the enzymes.

Table S1: HPLC data of released FDCA for the enzymatic hydrolysis performed at 50 and 65 °C with Thc_cut1 and HiC respectively in 0.1 M Tris-HCl pH 7 and 1 M KPO pH8.

65 °C	Tris-HCl, Thc_cut1		Tris-HCl, HiC		KPO, Thc_cut1		KPO, HiC	
Time (h)	Average	Stdv.	Average	Stdv.	Average	Stdv.	Average	Stdv.
24	3.076	0.091	1.916	0.030	1.597	0.171	3.406	0.221
48	3.293	0.054	2.575	0.123	4.173	0.297	7.687	0.287
72	3.238	0.078	2.412	0.085	5.872	0.750	10.573	0.289
96	3.189	0.071	2.561	0.185	8.928	0.542	12.836	0.634
50 °C	Tris-HCl, Thc_cut1		Tris-HCl, HiC		KPO, Thc_cut1		KPO, HiC	
Time (h)	Average	Stdv.	Average	Stdv.	Average	Stdv.	Average	Stdv.
24	0.030	0.005	0.151	0.017	0.045	0.002	0.087	0.008
48	0.106	0.018	0.759	0.025	0.107	0.004	0.270	0.010
72	0.826	0.064	2.421	0.070	0.171	0.007	0.570	0.076
96	0.936	0.031	3.475	0.132	0.207	0.002	0.869	0.041

Table S2: weight loss data for the enzymatic hydrolysis performed at 50 and 65 °C with Thc_cut1 and HiC respectively in 0.1 M Tris-HCl pH 7 and 1 M KPO pH8.

65 °C		Tris, Cut1		Tris, HiC		KPO, Cut1		KPO, HiC	
Time (h)		Average	Stdv	Average	Stdv	Average	Stdv	Average	Stdv
24		4.089	0.357	7.265	0.599	11.312	0.313	42.968	2.032
48		5.146	0.398	8.397	0.602	28.442	1.230	93.466	3.943
72		5.766	0.710	8.769	0.098	33.902	2.473	100.000	0.000
96		6.104	0.697	8.769	0.603	55.267	1.091	100.000	0.000
50 °C		Tris, Cut1		Tris, HiC		KPO, Cut1		KPO, HiC	
Time (h)		Average	Stdv	Average	Stdv	Average	Stdv	Average	Stdv
24		0	0.492	2.399	0.202	0.265	0.314	4.440	0.475
48		0	0.306	5.182	0.310	2.012	0.138	11.044	0.304
72		0	0.212	5.636	0.176	0.481	0.390	15.498	0.728
96		0	0.710	6.241	0.422	1.749	0.606	20.482	0.407

Table S3: LC/TOF-MS detected release products after enzymatic hydrolysis of PEF.

Compound	Structure
FDCA-EG	
EG-FDCA-EG	
FDCA-EG-FDCA	
2FDCA-2EG	

