

Supporting Information

Biobased Polyester from Soybean Oil: Synthesis, Characterization and Degradation Studies

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Replacements of maeso on UP:

Table S1 – Recipes for MAESO-St replacement

Materials	UP	MAESO-St		
		100%	50%	25%
MAESO-St	-	94.88	47.44	23.72
Resin UP	94.88	-	47.44	71.16
Additives	2.82	2.82	2.82	2.82
OCo	0.80	0.80	0.80	0.80
MEK	1.50	1.50	1.50	1.50
Total	100	100	100	100



S2- Inoculum preparation:

For this procedure, from each microorganism one wire loop was transferred to a test tube with ME (meat peptone 1000 mg/l, malt extract 20000 mg/l, glucose 20000 mg/l, and water). 1 ml of this solution was extracted and seeded in a new tube with 9 ml of ME. This test tube was incubated for 4 days at 30 °C. The test tube was then completely poured in a culture flask containing 90 ml of ME. These solutions were called “Inoculum”; with them all the enzymatic degradation tests were seeded.

Relation Signals of FT-IR

Table S3 shows the analysis of the area of these signals and their relation to 2927 cm⁻¹ signal (stretching of the C-H bond of the alkanes) and 1750 cm⁻¹ signal (stretching of the ester bonds). It should be noted that both ratios with each signal, 2927 and 1750 cm⁻¹, follow the same trend.

Table S3 – Absorbance ratios for ESO measured by FT-IR (55 °C; 6 h)*

	Signal (cm ⁻¹)	SO*	ESO1	ESO2	ESO3	AESO1	AESO2	AESO3	AESO4
C=C/C=O	3050	2.70	-	1.14	1.30	-	-	-	-
C=C/CH2	3050	2.80	-	0.99	1.40	-	-	-	-
 /C=O	820	-	1.54	0.79	0.10	-	-	-	-
 CH2	820	-	1.38	0.74	0.09	-	-	-	-
C=C/C=O	1636	-	-	-	-	0.58	0.52	0.41	0.43
C=C/CH2	1636	-	-	-	-	0.90	0.79	0.52	0.91
COC/C=O	1170	-	3.90	5.65	5.78	4.08	6.60	8.45	5.04
COC/CH2	1170	-	4.19	4.94	6.23	6.23	8.43	9.10	10.5

*all values in the Table are affected by 10⁻¹.