Supporting Material

Investigation of the catalytic activity and reaction kinetic modeling of two antimony catalysts in the synthesis of poly(ethylene furanoate)

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Table S1. Calculated conversions with Sb_2O_3 catalyst.

Time	160 °C		170 °C		190 °C	
(h)	Titration	NMR	Titration	NMR	Titration	NMR
0	0	0	0	0	0	0
0.5	23.8	23.1	30.6	26.1	53.2	65.8
1.0	31.9	33.2	42.1	51.4	72.3	78.7
1.5	40.2	44.3	58.3	66.6	83.5	86.7
2.0	47.8	52.7	66.9	72.1	88.1	89.8
2.5	55.3	61.1	73.4	78.9	91.7	92.2
3.0	61.3	66.1	77.7	81.0	92.1	92.6
3.5	65.6	70.9	80.9	83.6	95.7	95.5
4.0	69	74	84.2	86.2	96.8	96.6

Table S2. Calculated conversions with $Sb(CH_3COO)_3$ catalyst.

Time	160 °C		170 °C		190 °C	
(h)	Titration	NMR	Titration	NMR	Titration	NMR
0	0	0	0	0	0.0	0
0.5	10.3	12.5	29.9	35.3	61.6	61.8
1.0	15.4	16.6	45.0	49.7	77.8	79.0
1.5	24.2	30.6	58.6	65.5	84.1	83.8
2.0	34.4	41.2	66.5	73.3	89.0	87.9
2.5	41.3	49.2	71.2	78.2	90.3	93.3
3.0	53.1	58.1	77.0	81.1	93.3	95.2
3.5	60.5	67.9	80.9	83.3	94.3	96.6
4.0	65.6	71.3	82.0	84.1	96.1	97.7

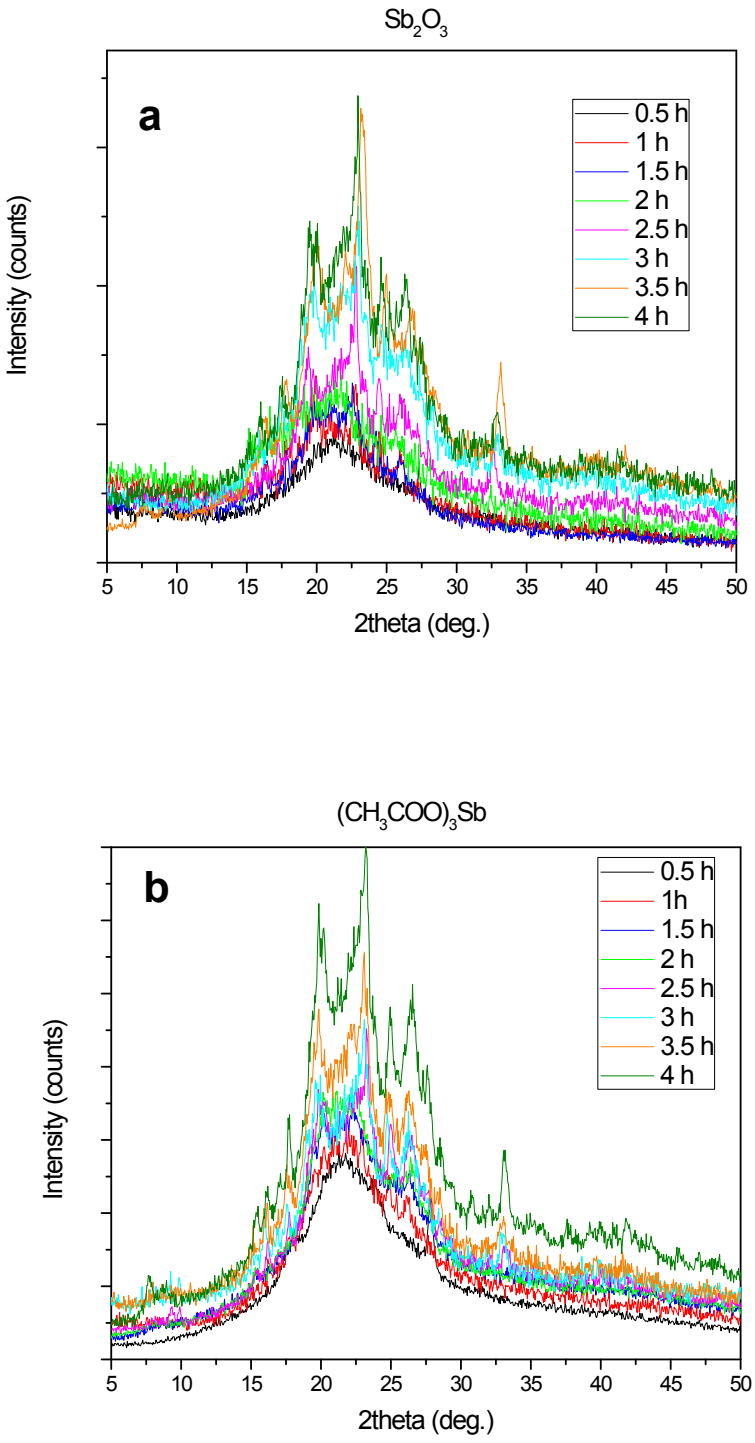
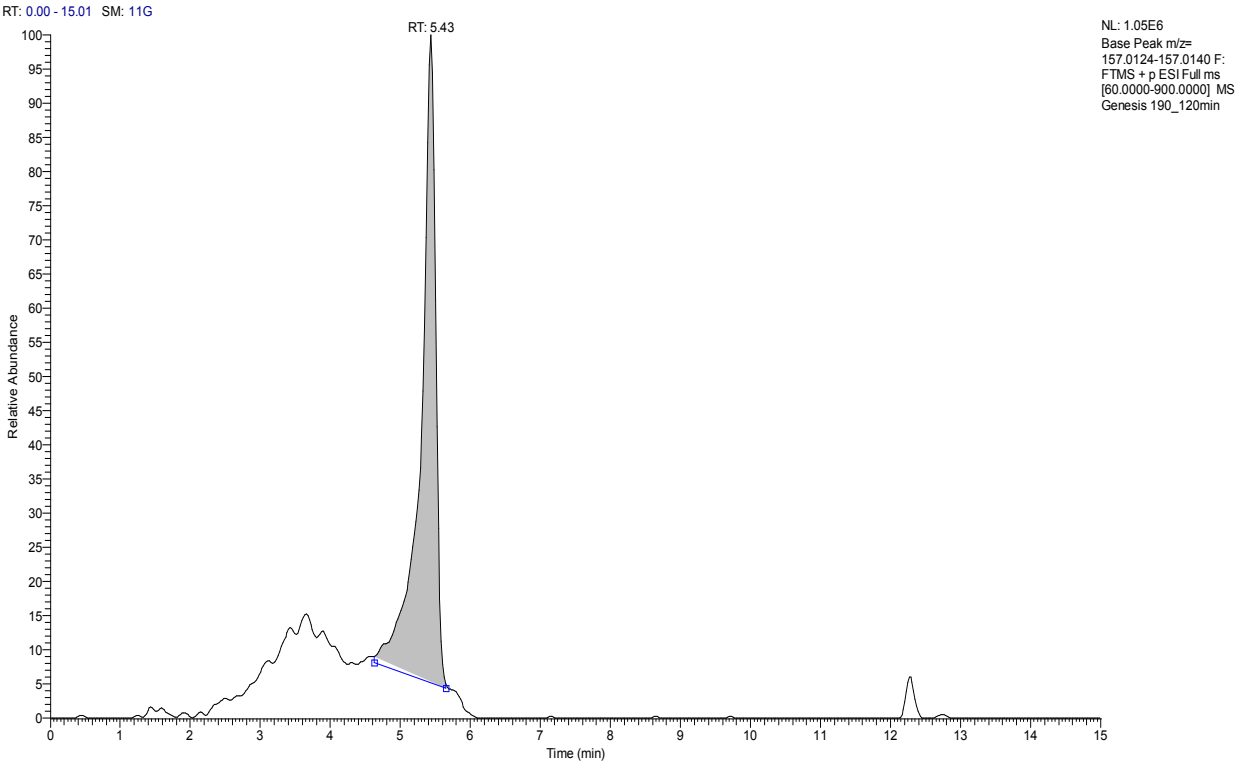
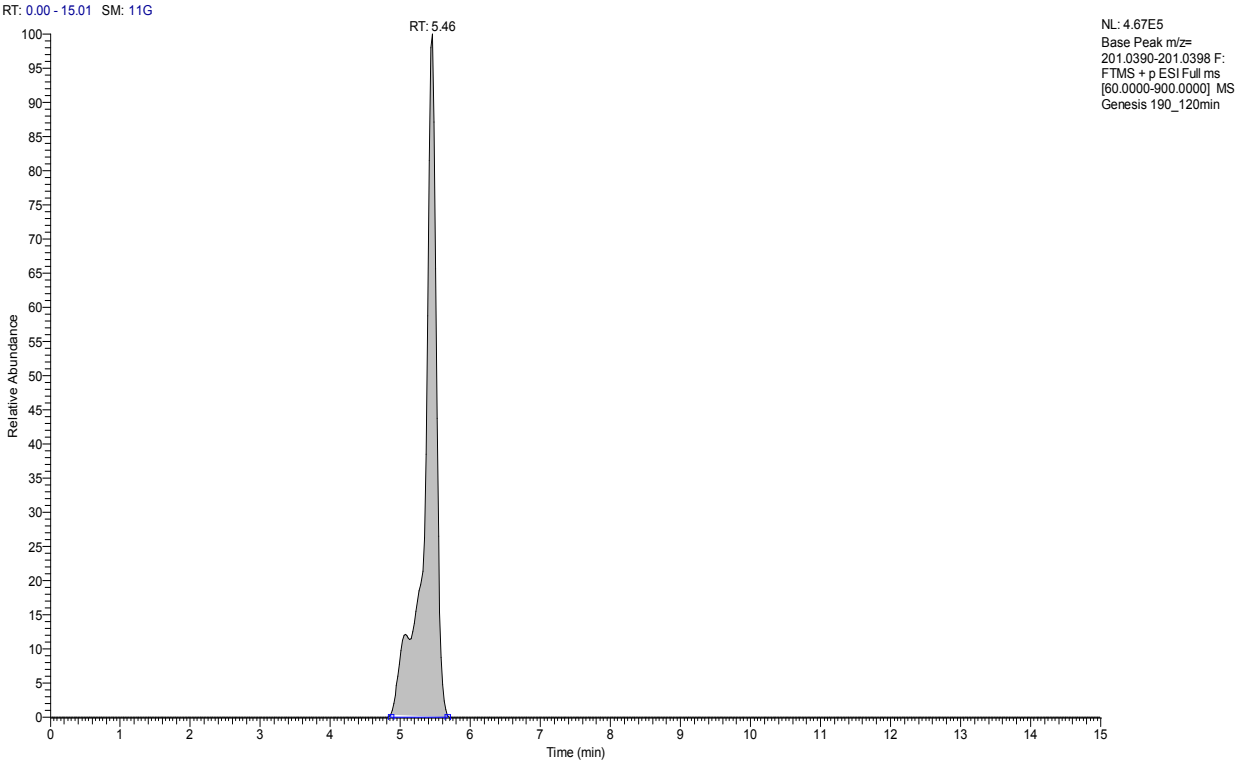


Figure S1. XRD patterns of collected oligomers for different esterification times at 190°C for a) Sb_2O_3 and b) $(CH_3COO)_3Sb$ catalysts**.**

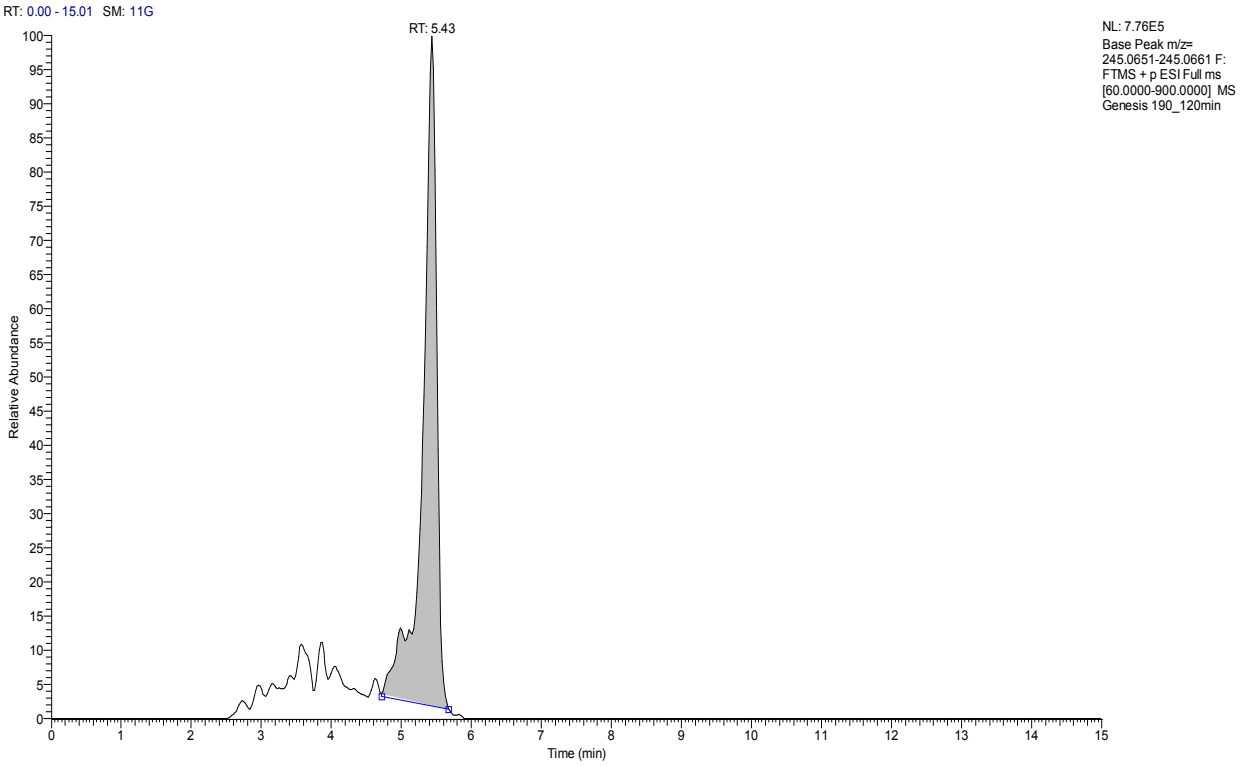
FDCA



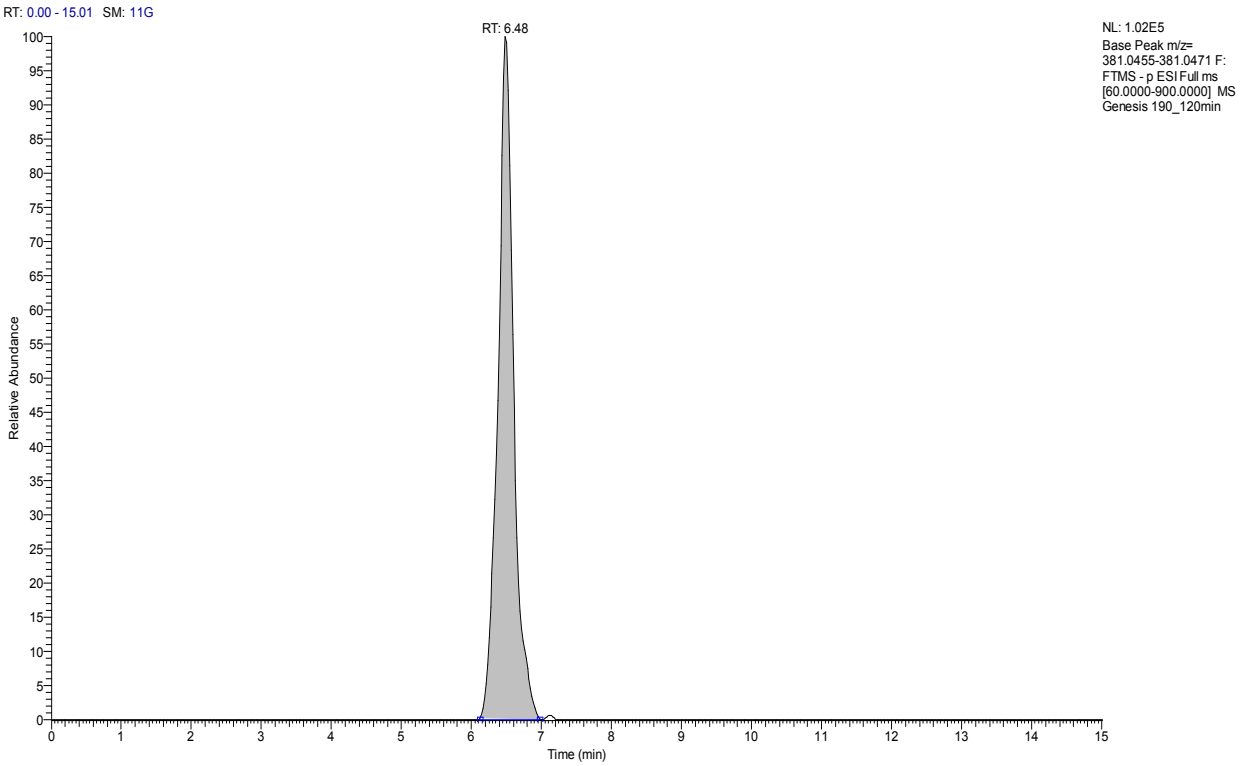
$C_8H_8O_6$ (Monomer)



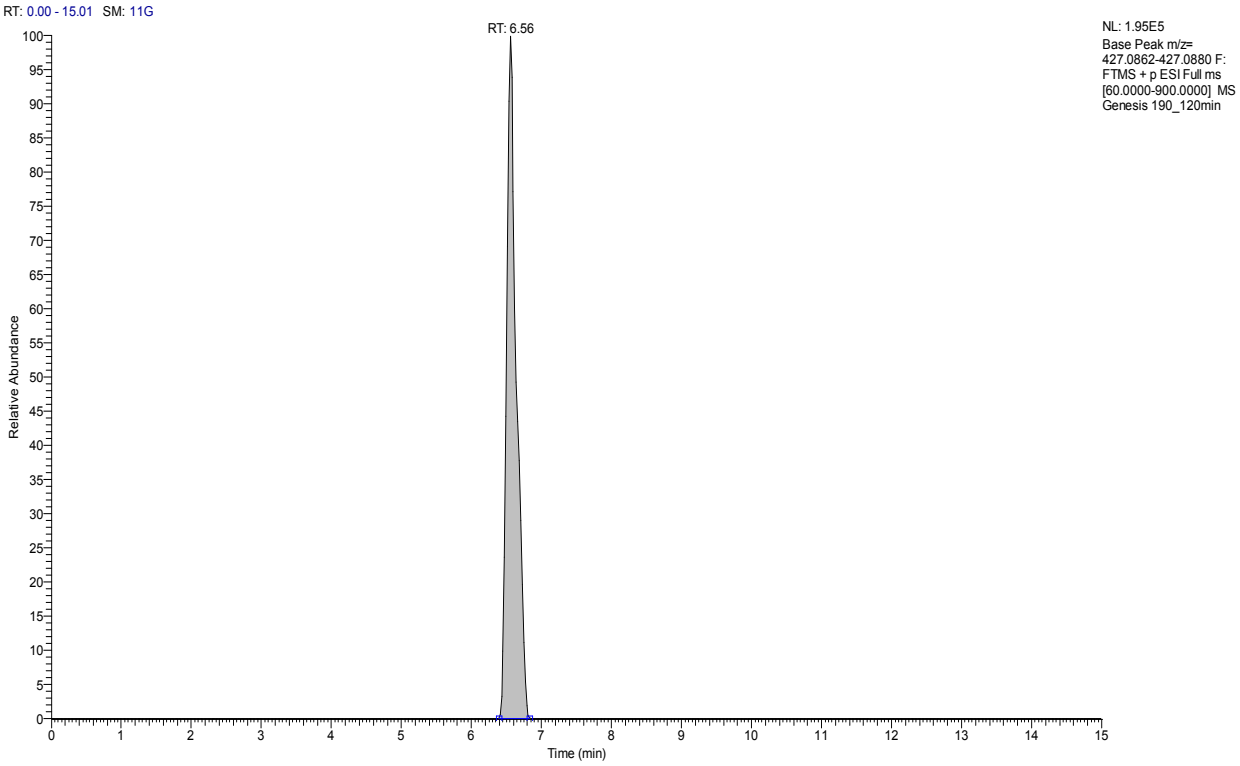
$C_{10}H_{12}O_7$ (Monomer)



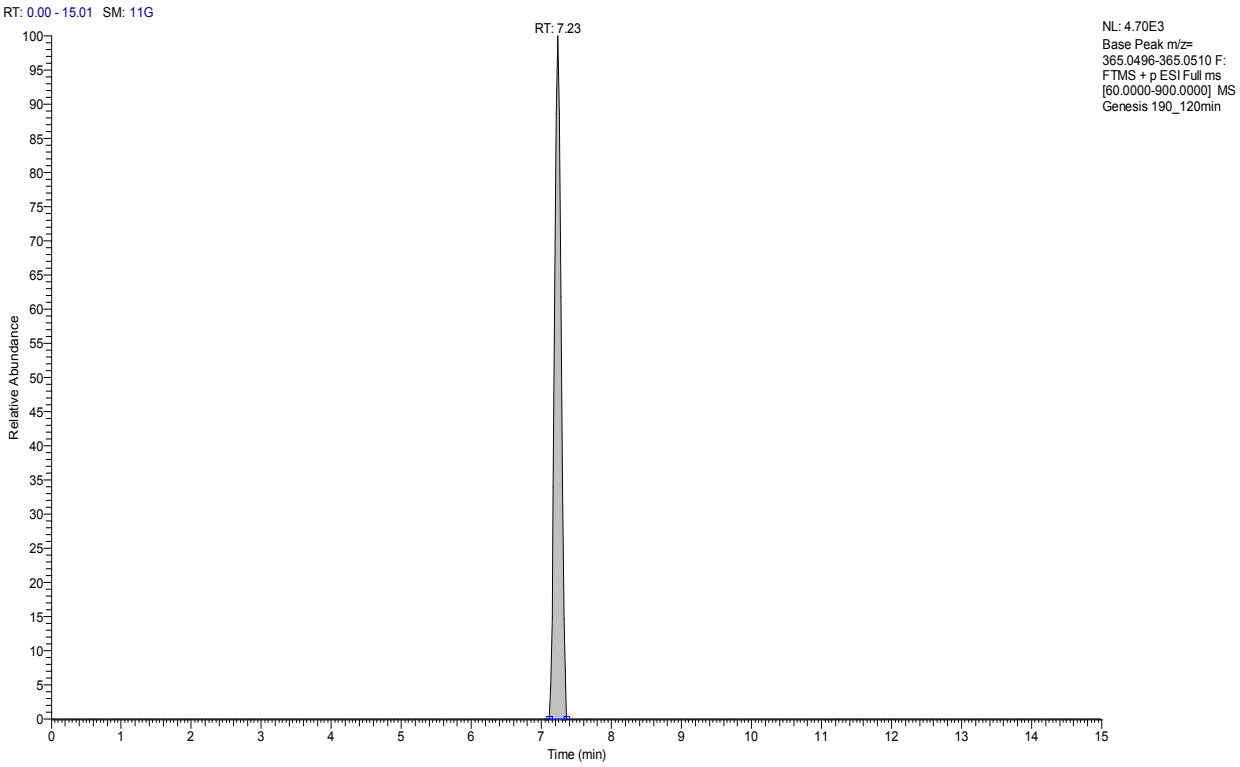
$C_{16}H_{14}O_{11}$ (Dimer)



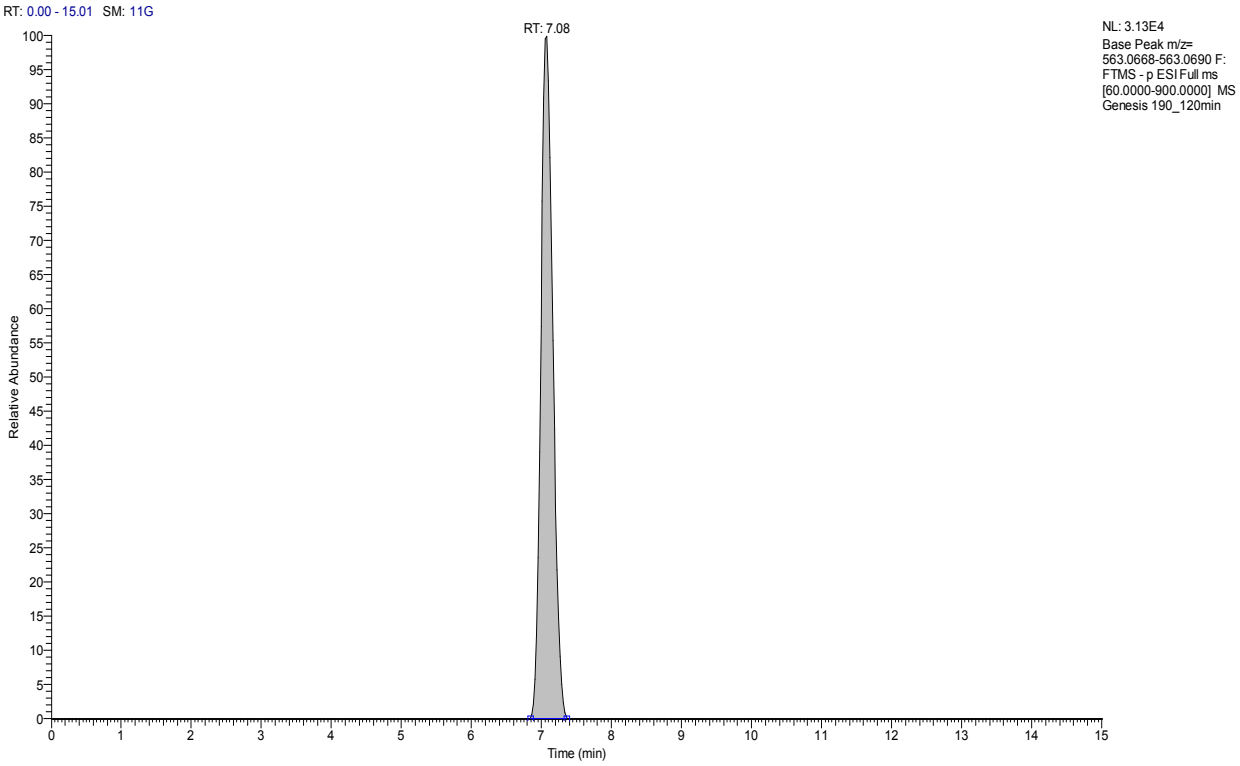
$C_{18}H_{18}O_{12}$ (Dimer)



$C_{16}H_{12}O_{10}$ (Dimer)



$C_{24}H_{20}O_{16}$ (Trimer)



$C_{26}H_{24}O_{17}$ (Trimer)

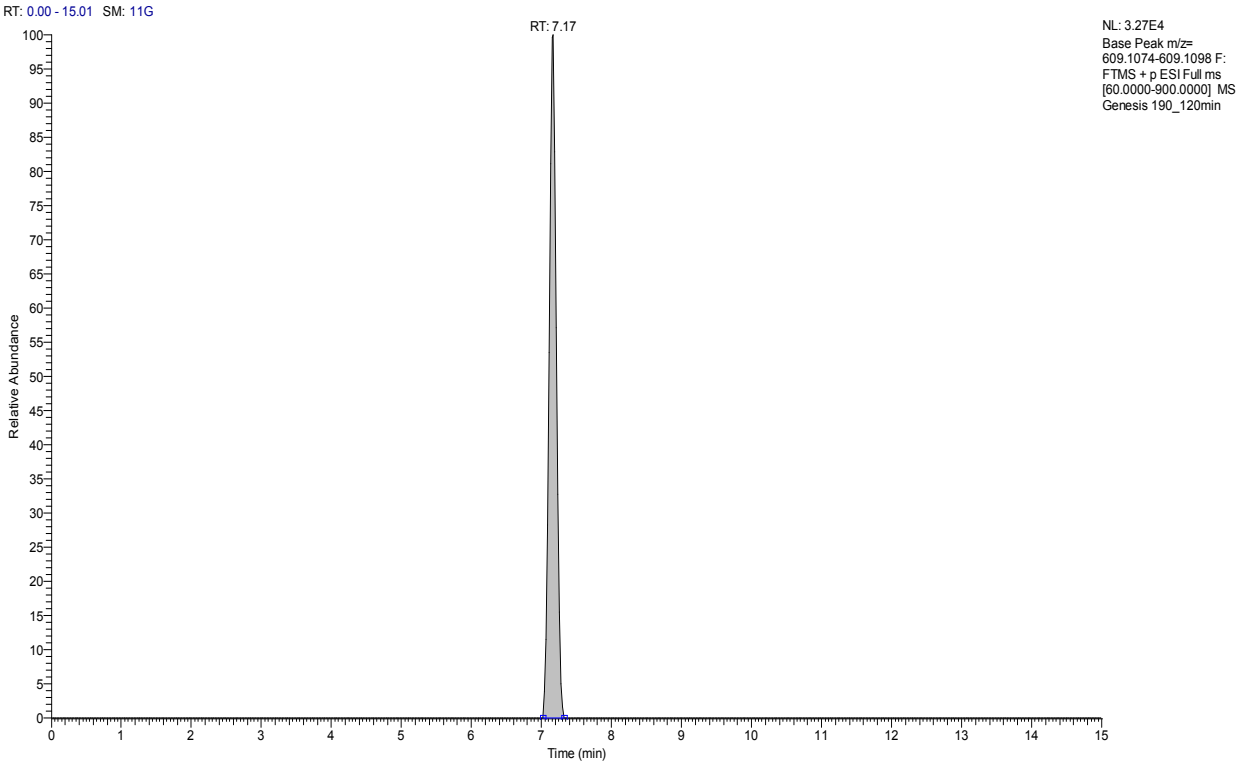


Figure S2. Total Ion chromatograms for FDCA and the detected oligomers.