

Increased Aromatics Formation by the Use of High-Density Polyethylene on the Catalytic Pyrolysis of Mandarin Peel over HY and HZSM-5

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Table S1. The yields of aromatics obtained from the catalytic pyrolysis of MP, HDPE, and their mixture over HY and HZSM-5 at 600 °C. (Unit: wt.%).

Sample	Catalyst	BTEXs	OMAHs	PAHs	TAHs
MP	HY	0.24	0.03	0.41	0.68
MP	HZSM-5	1.14	0.41	1.47	3.02
HDPE	HY	2.30	2.83	2.58	7.71
HDPE	HZSM-5	5.19	2.14	0.73	8.07
MP+HDPE	HY	1.72	1.52	1.82	5.06
MP+HDPE	HZSM-5	3.48	0.96	1.60	6.04

- BTEXs: Benzene, toluene, ethylbenzene, and xylenes
- OMAHs: Other mono-aromatics except BTEXs
- PAHs: Poly aromatics
- TAHs: Total aromatics

Table S2. Physico-chemical properties of MP and HDPE.

Sample		MP	HDPE
Proximate analysis	Water	5.3	-
	Volatiles	74.8	99.9
	Fixed carbon	18.3	0.01
	Ash	1.6	-
	Sum	100	100
Ultimate analysis ^a	C	44.5	85.4
	H	6.9	14.6
	O ^b	47.5	-
	N	1.1	-
	S	-	-

^aOn a dry basis, ^bBy difference

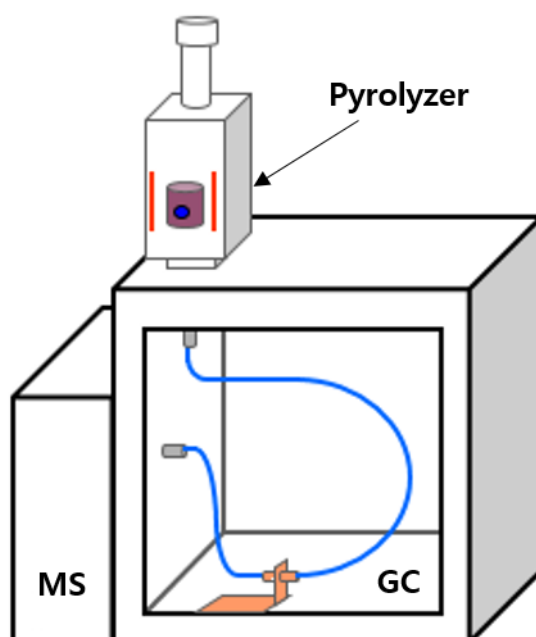


Figure S1. The Schematic diagram of Pyrolyzer-GC/MS.