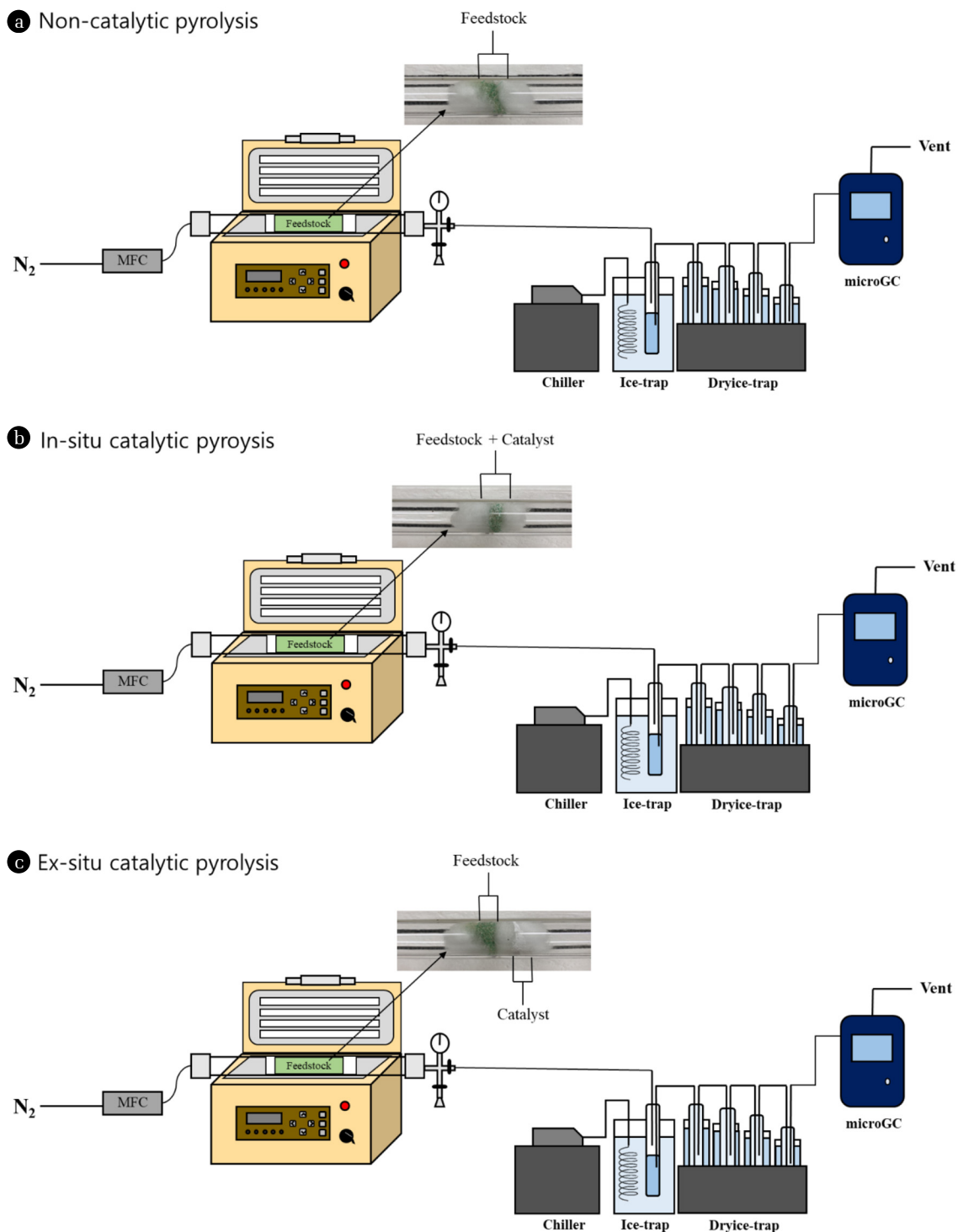




## Supplementary Materials



**Fig. S1.** Schematic of the reactor setup designed for the pyrolysis of fishing net waste

**Table S1.** Specification, Column Information, and Analytical Conditions for the GC - MS

<b>Model</b>	<b>GC: Agilent 7890A; MS: Agilent 5975C</b>	
Column	HP-5MS Ultra Inlet column (0.25 mm × 0.25 μm × 30 m)	
Oven setting	Initial temperature	40 °C (1 min)
	Ramping	3 °C min <sup>-1</sup>
	Final temperature	280 °C (19 min)
	Total analysis time	100 min
Column setting	Carrier gas	Helium (≥99.999%)
	Carrier gas flow	1.5 mL min <sup>-1</sup>
	Column flow	1 mL min <sup>-1</sup>
Injector setting	Injection mode	Splitless
	Injection volume	1 μL
	Injection temperature	275 °C
MS setting	Aux temperature	300 °C
	m/z range	50~500 amu

**Table S2.** Specification, Column Information, and Analytical Conditions for the micro GC

<b>Model</b>	<b>INFICON Fusion Gas Analyzer</b>		
Conditions		Module A	Module B
Column		Rt-Molsieve 5A	Rt-Q-Bond
Sample Pump setting	Sample pump mode	Continuous	Continuous
	Sample pump time	20 s	20 s
Column setting	Carrier gas	Argon (≥99.999%)	Helium (≥99.999%)
	Column pressure	20 psi	17 psi
	Initial temperature	50 °C (40 s)	50 °C (30 s)
	Ramping time	50 s	60 s
	Final temperature	100 °C (40 s)	110 °C (40 s)
	Total analysis time	130 s	130 s
Injector setting	Inject time	30 ms	30 ms
	Injector temperature	90 °C	90 °C
TCD setting	TCD temperature	70 °C	70 °C
	Data rate	50 Hz	50 Hz