

Supplementary Material

Thermal hydrolysis of oily sludge reduces waste disposal and provides substrate to anaerobic photo-biological treatment of refinery wastewater

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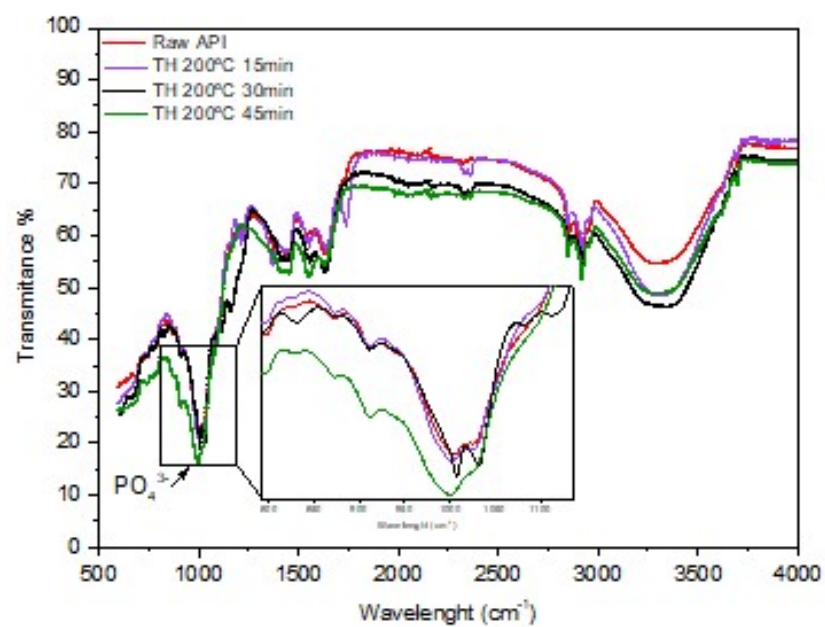


Figure S1: FTIR spectra of the solid fraction of the oily sludge before and after TH at 200°C.

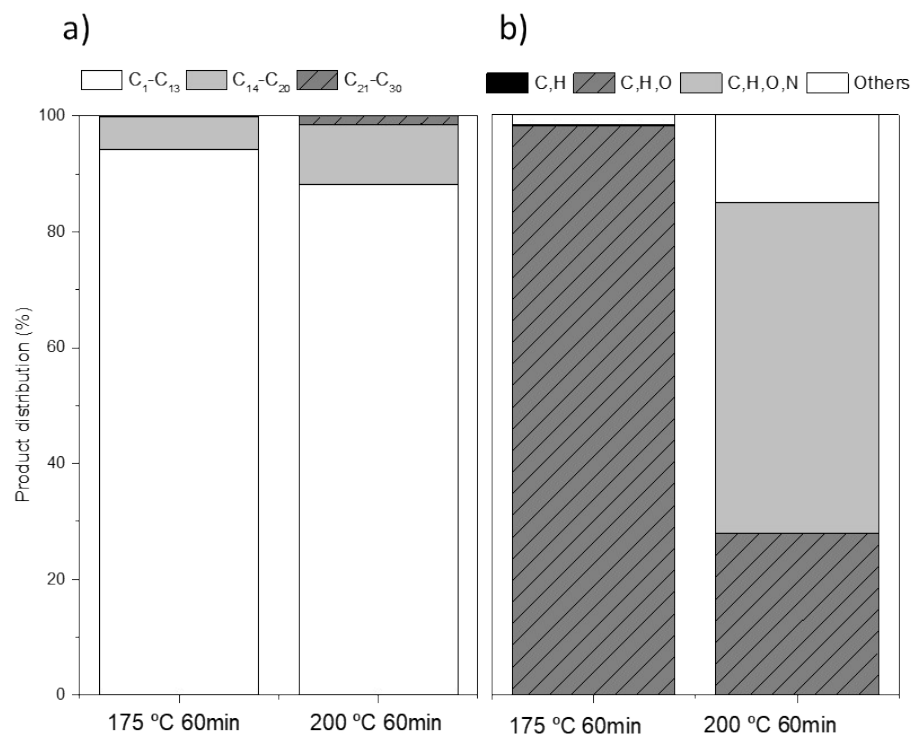


Figure S2: Hydrocarbon product distribution based on the number of carbon atoms (a) and components (b) in the aqueous of oily sludge, after TH at 175 and 200°C during 60 min.

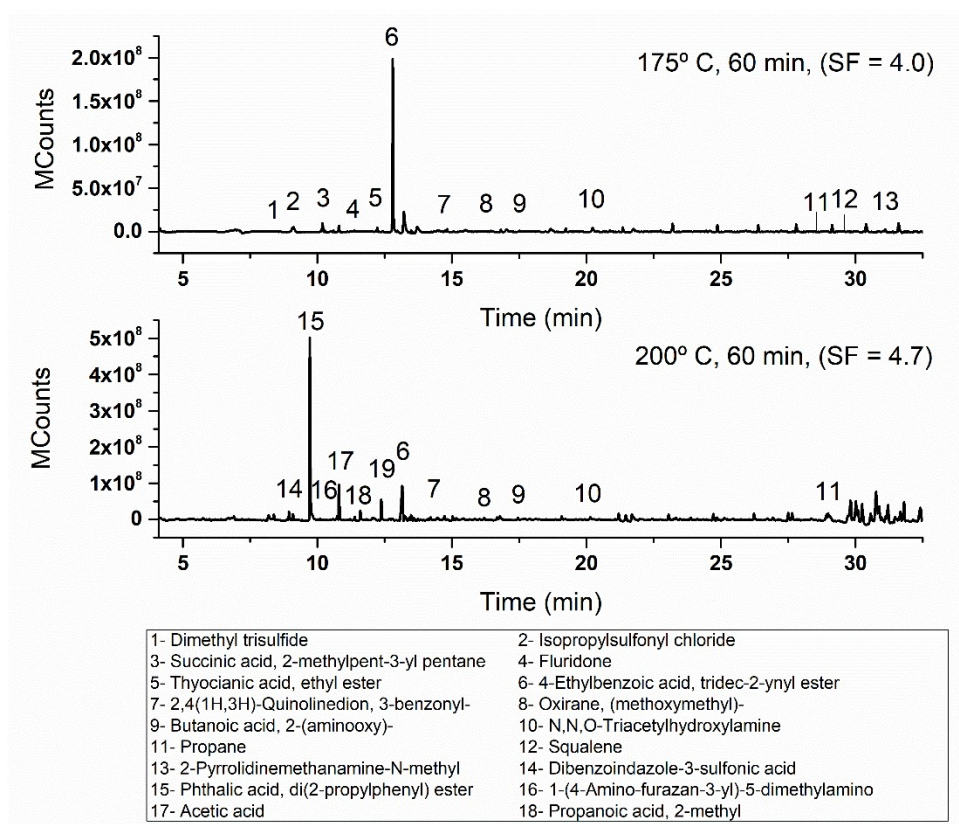


Figure S3: GC-MS chromatograph resulted from the analysis of the aqueous phase obtained at TH 175°C and 60min and 200°C and 60 min

Table S1. COD/N/P ratios of wastewater, the hydrolyzed fraction of thermal hydrolysis, and aqueous mediums of the photoanaerobic tests.

RWW	Hydrolyzed fraction of TH		RWW + Hydrolyzed fraction of TH
	Conditions (°C-min)	COD/N/P	COD/N/P
100/1.5/0.37	175- 15	100/2.8/0.04	100/3.0/0.28
	175-30	100/2.7/0.06	100/2.9/0.18

	175-60	100/3.2/0.08	100/3.3/0.24
	200- 15	100/4.8/0.13	100/4.5/0.31
	200-30	100/4.6/0.09	100/4.4/0.30
	200-60	100/4.1/0.06	100/4.0/0.33