

Lipophilicity Study of Fumaric and Maleic Acids

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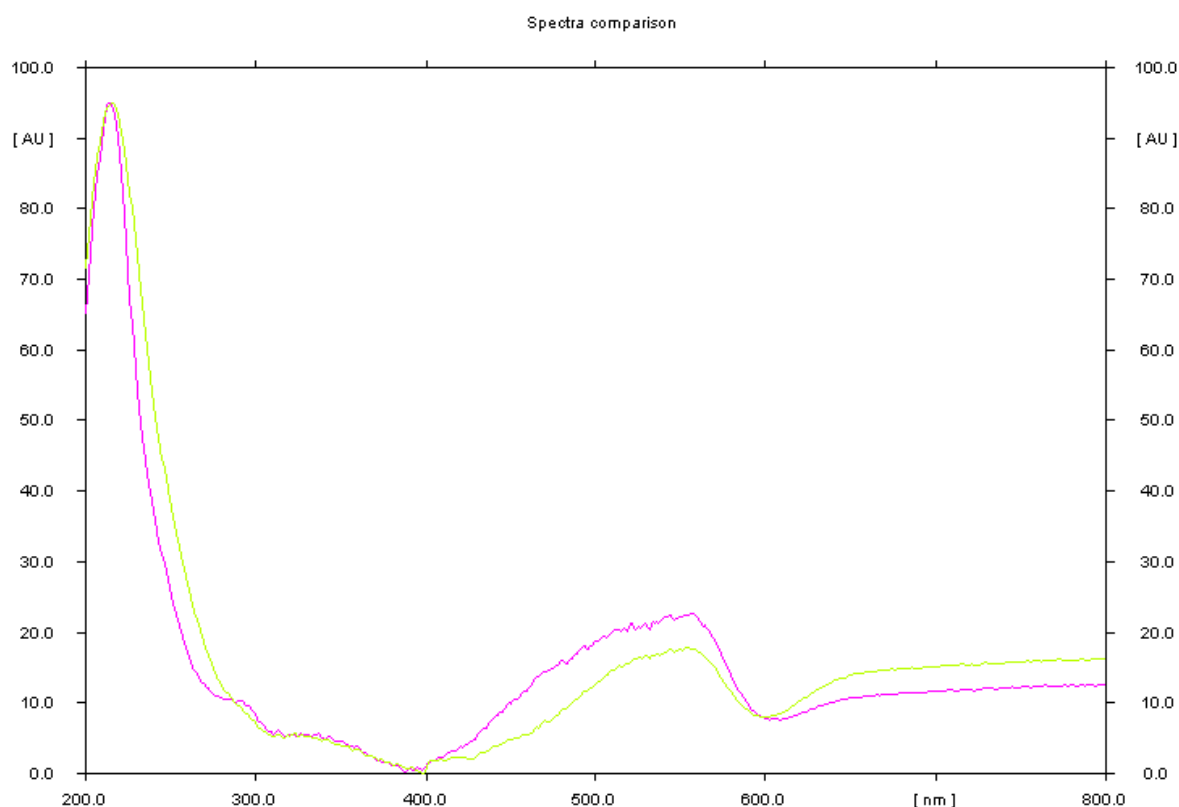


Figure S1. Spectrodensitograms of maleic acid (pink line) and fumaric acid (celadon line).

Table S1. Average of spot area [AU] of maleic and fumaric acids analyzed by NP-TLC.

Microgram/spot	Average of spot area [AU] (n=5)	
	Maleic acid	Fumaric acid
4	2265	19633
8	4856	27825
12	8325	34571
16	12456	44674
20	14589	49092
24	16584	54909
28	18554	59402
32	20525	69180
36	24521	72796

40	26538	80267
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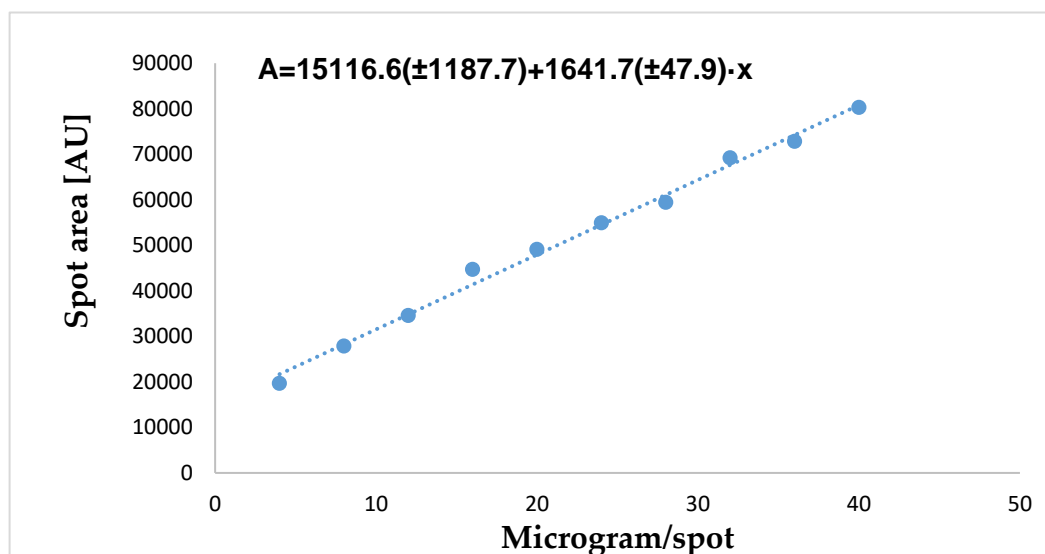


Figure S2. Calibration curve of fumaric acid tested by NP-TLC chromatography.

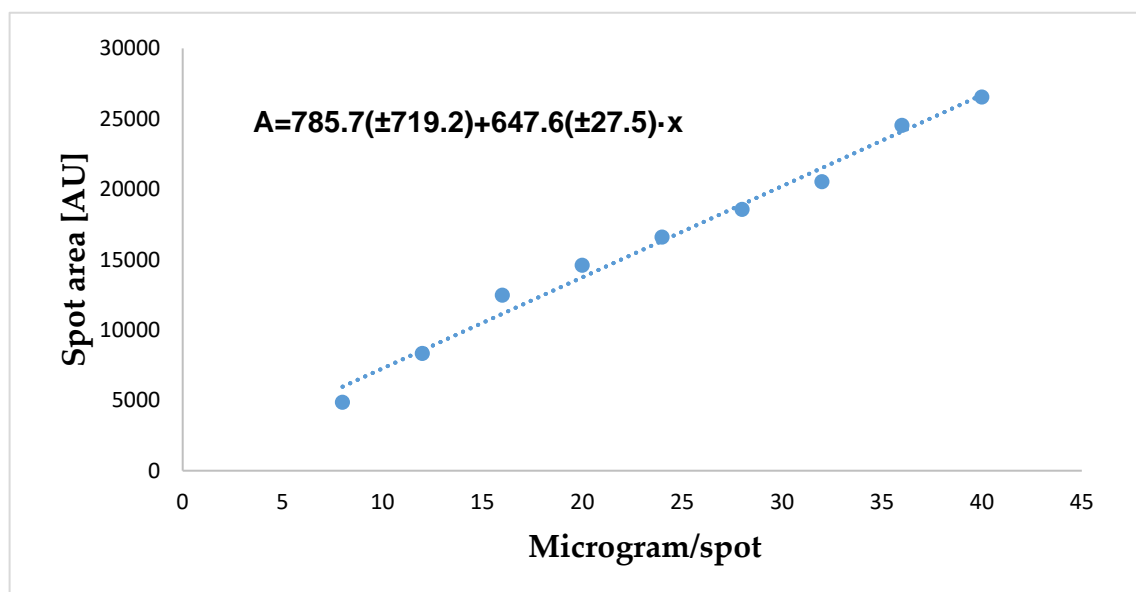


Figure S3. Calibration curve of maleic acid tested by NP-TLC chromatography.

Table S2. R_M values of maleic acid analyzed by RP-TLC technique using methanol-water mobile phase.

Volume fraction of methanol in the methanol-water mobile phase	R_M values on chromatographic plates		
	RP18WF ₂₅₄	RP8F _{254s}	CNF _{254s}
1	-	-2.020	-
0.9	-	-1.797	-
0.8	-2.756	-1.684	-2.999
0.7	-2.479	-1.571	-2.714
0.6	-2.103	-1.458	-2.500
0.5	-1.925	-1.412	-2.199
0.4	-1.734	-1.232	-2.038
0.3	-1.371	-1.202	-1.852
0.2	-0.985	-1.006	-1.599

Table S3. R_M values of maleic acid analyzed by RP-TLC technique using dioxane-water mobile phase.

Volume fraction of dioxane in the dioxane-water mobile phase	R_M values on chromatographic plates		
	RP18WF ₂₅₄	RP8F _{254s}	CNF _{254s}
1	-	-	-
0.9	-	-	-2.905
0.8	-2.988	-2.789	-2.625
0.7	-2.699	-2.714	-2.385
0.6	-2.532	-2.598	-2.155
0.5	-2.386	-2.499	-1.989
0.4	-2.199	-2.312	-1.843
0.3	-1.972	-2.255	-1.554
0.2	-1.702	-1.995	-1.345

Table S4. R_M values of fumaric acid analyzed by RP-TLC technique using methanol-water mobile phase.

Volume fraction of methanol in the methanol-water mobile phase	R_M values on chromatographic plates		
	RP18WF ₂₅₄	RP8F _{254s}	CNF _{254s}
1	-2.315	-2.560	-2.312
0.9	-1.999	-2.324	-1.898
0.8	-1.625	-1.995	-1.526
0.7	-1.345	-1.458	-1.289
0.6	-1.152	-1.288	-0.785
0.5	-0.789	-0.995	-0.565
0.4	-0.525	-0.702	-0.278
0.3	0.119	-0.549	0.089
0.2	0.352	-0.158	0.312

Table S5. R_M values of fumaric acid analyzed by RP-TLC technique using dioxane-water mobile phase.

Volume fraction of dioxane in the dioxane-water mobile phase	R_M values on chromatographic plates		
	RP18WF ₂₅₄	RP8F _{254s}	CNF _{254s}
1	-2.899	-2.890	-
0.9	-2.481	-2.184	-
0.8	-2.209	-1.738	-2.712
0.7	-1.858	-1.531	-2.108
0.6	-1.614	-1.287	-1.802
0.5	-1.425	-0.857	-1.489
0.4	-1.135	-0.425	-1.089
0.3	-0.785	-0.175	-0.712
0.2	-0.395	0.135	-0.315