

Comparison of the Retention and separation Selectivity of Aromatic Hydrocarbons with Polar Groups in RP-HPLC Systems with Different Stationary Phases and Eluents

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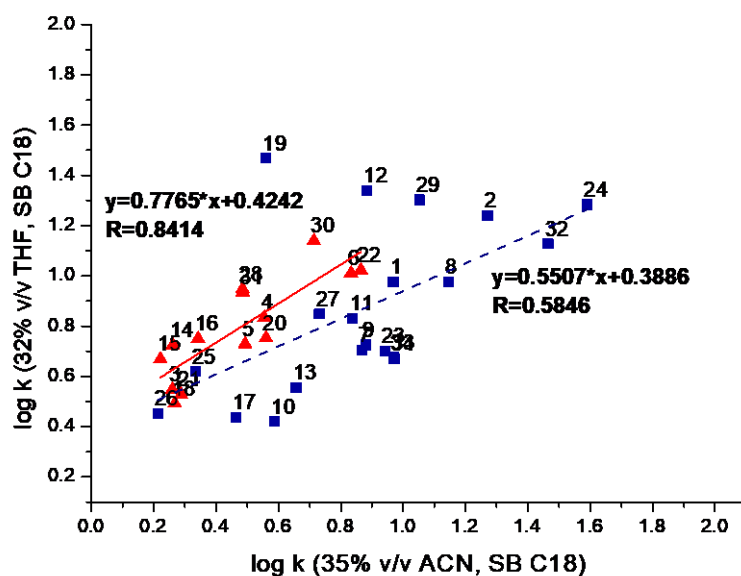


Figure S1. Log k in 32% v/v THF plotted against log k in 35% v/v ACN. SB C18 stationary phase. Solute numbers as in Table 2.

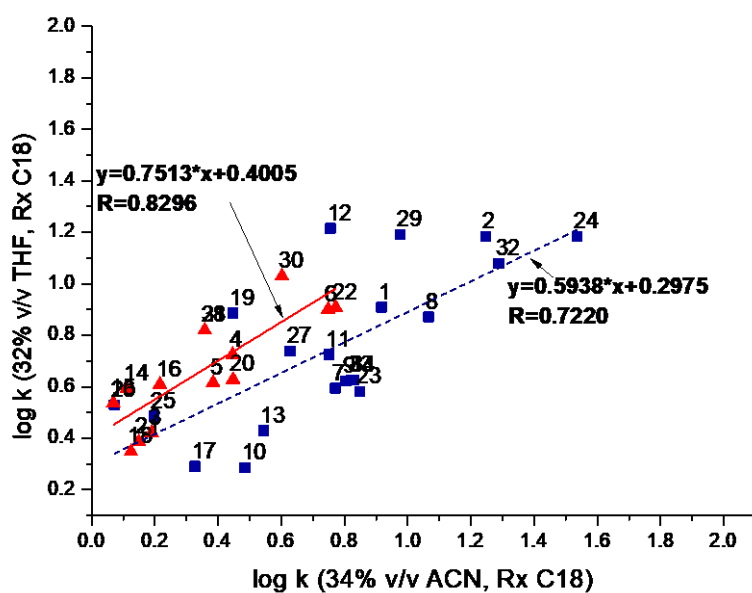


Figure S2. Log k in 32% v/v THF plotted against log k in 34% v/v ACN. Rx C18 stationary phase. Solute numbers as in Table 2.

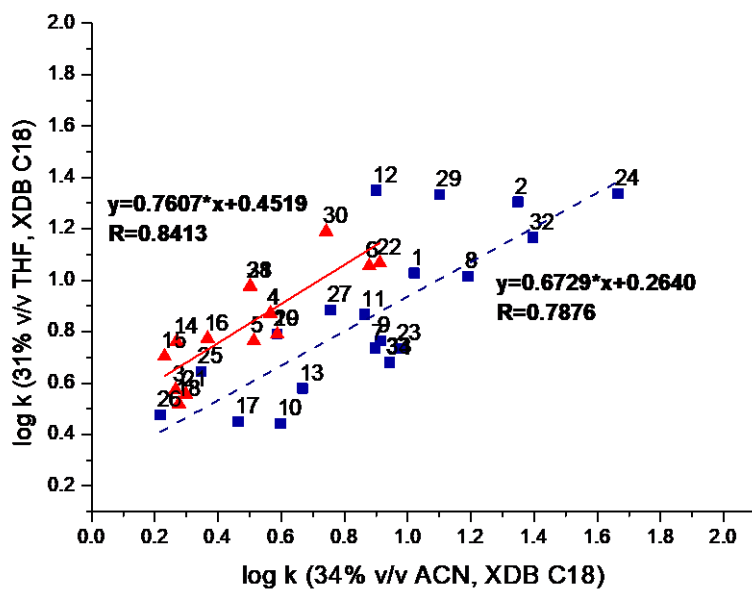


Figure S3. Log k in 31% v/v THF plotted against log k in 34% v/v ACN. Eclipse XDB C18 stationary phase. Solute numbers as in Table 2.

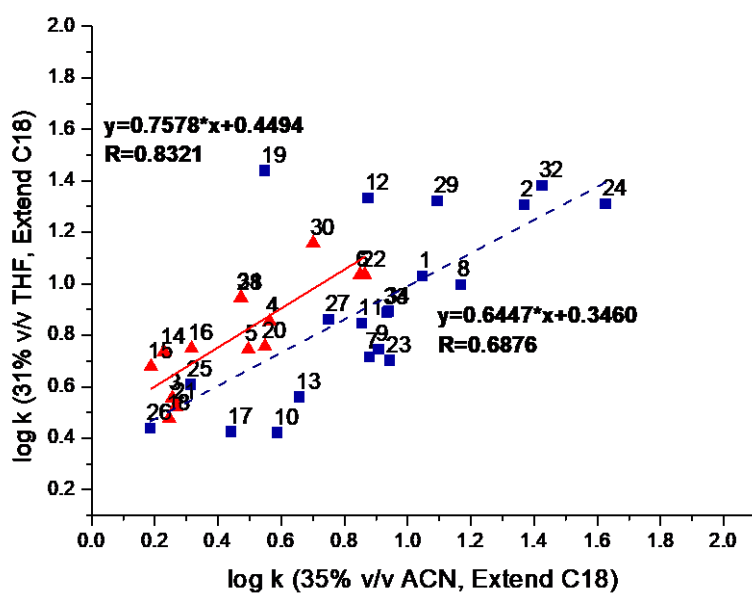


Figure S4. $\log k$ in 31% v/v THF plotted against $\log k$ in 35% v/v ACN. Extend C18 stationary phase. Solute numbers as in Table 2.

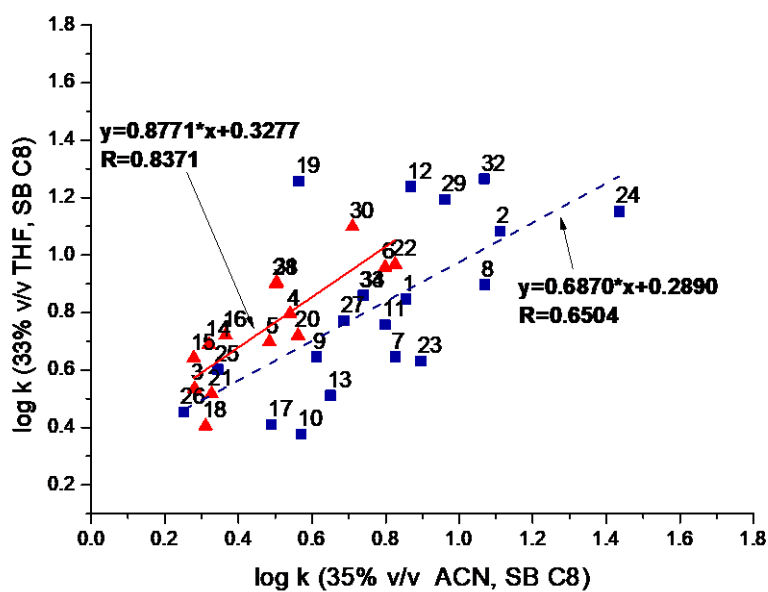


Figure S5. $\log k$ in 33% v/v THF plotted against $\log k$ in 35% v/v ACN. SB C8 stationary phase. Solute numbers as in Table 2.

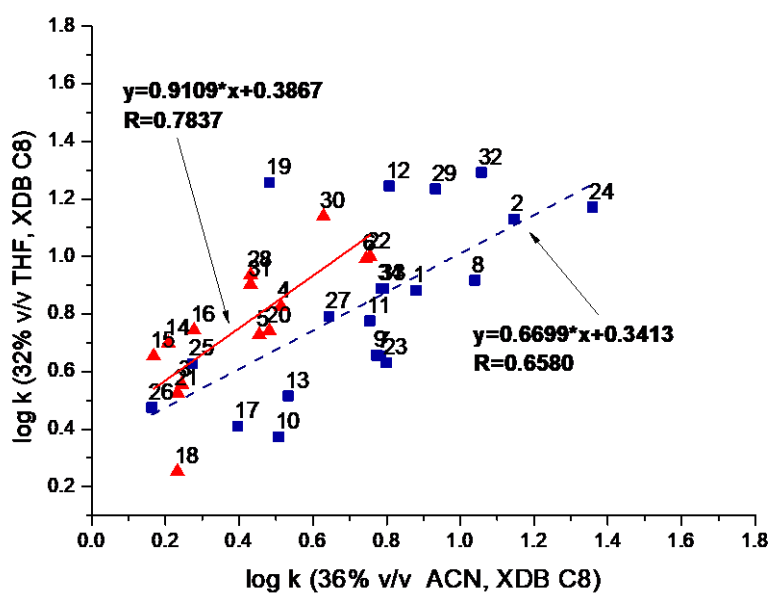


Figure S6. Log k in 32% v/v THF plotted against log k in 36% v/v ACN. Eclipse XDB C8 stationary phase. Solute numbers as in Table 2.

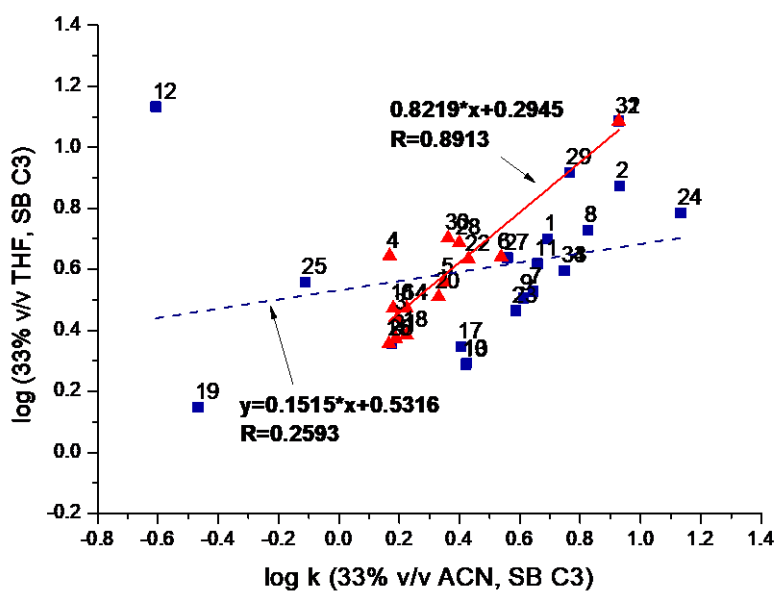


Figure S7. Log k in 33% v/v THF plotted against log k in 33% v/v ACN. SB C3 stationary phase. Solute numbers as in Table 2.

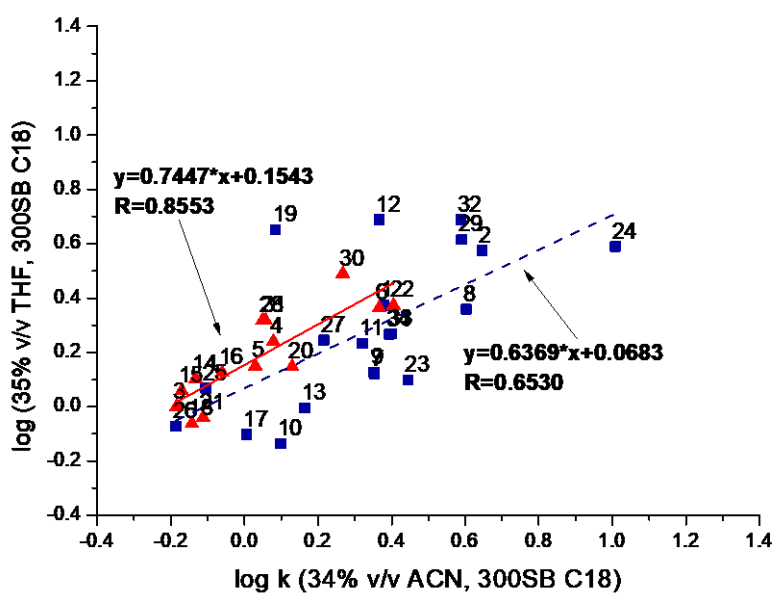


Figure S8. Log k in 35% v/v THF plotted against log k in 34% v/v ACN. 300 SB C18 stationary phase. Solute numbers as in Table 2.

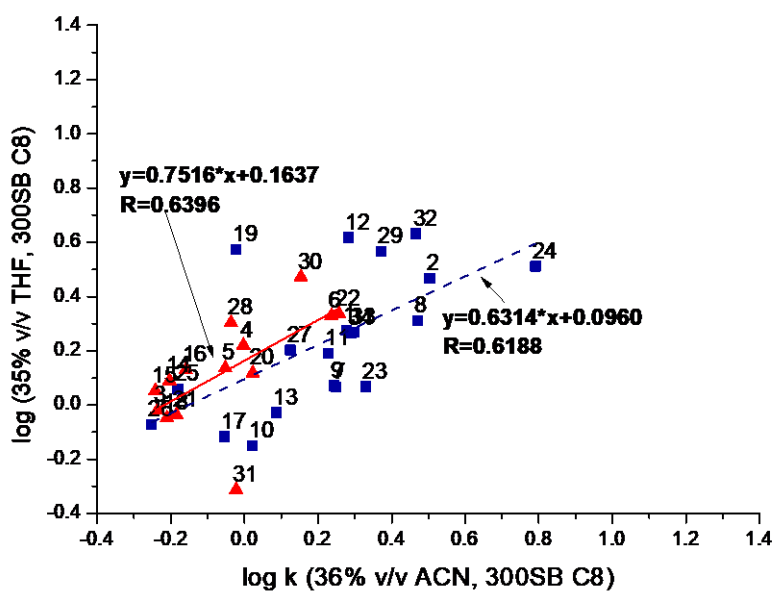


Figure S9. Log k in 35% v/v THF plotted against log k in 36% v/v ACN. 300 SB C8 stationary phase. Solute numbers as in Table 2.

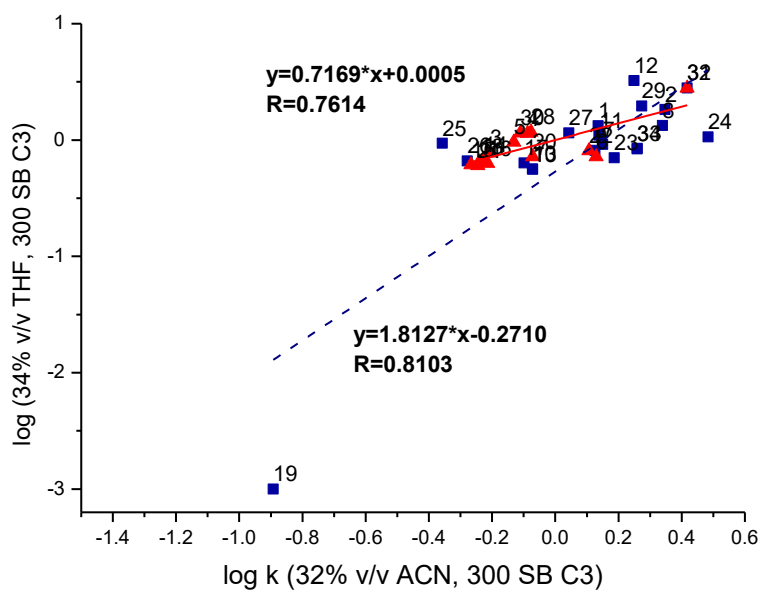


Figure S10. Log k in 34% v/v THF plotted against log k in 32% v/v ACN. 300 SB C3 stationary phase. Solute numbers as in Table 2.

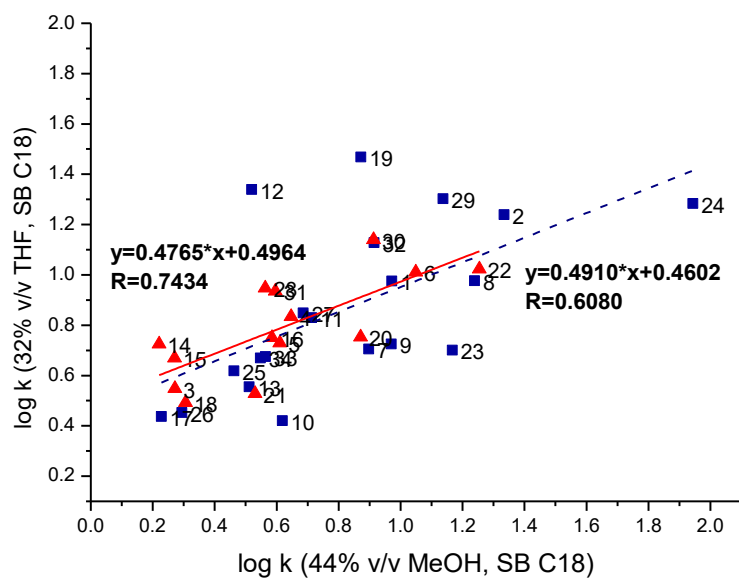


Figure S11. Log k in 32% v/v THF plotted against log k in 44% v/v MeOH. SB C18 stationary phase. Solute numbers as in Table 2.

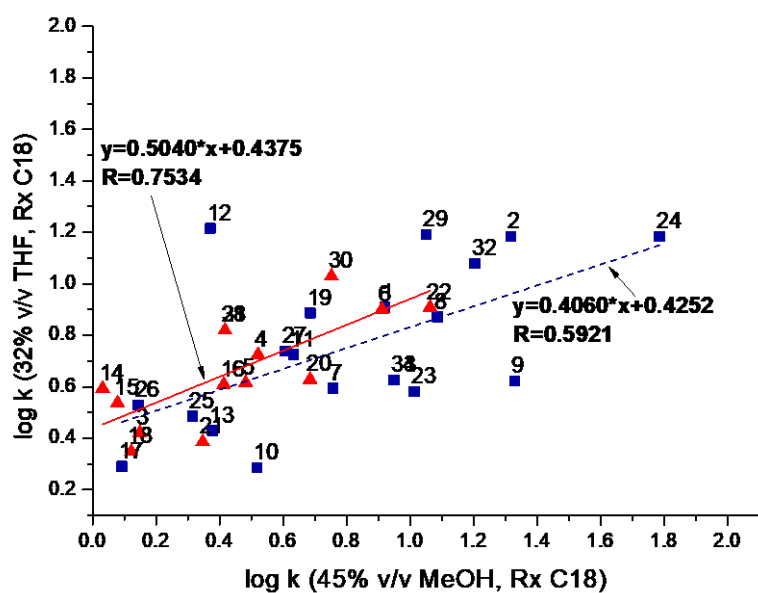


Figure S12. Log k in 32% v/v THF plotted against log k in 45% v/v MeOH. Rx C18 stationary phase. Solute numbers as in Table 2.

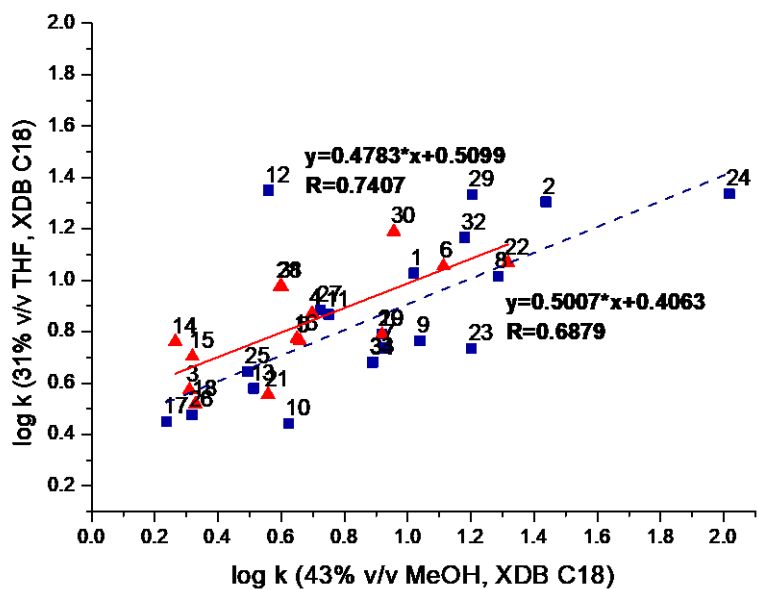


Figure S13. Log k in 31% v/v THF plotted against log k in 43% v/v MeOH. Eclipse XDB C18 stationary phase. Solute numbers as in Table 2.

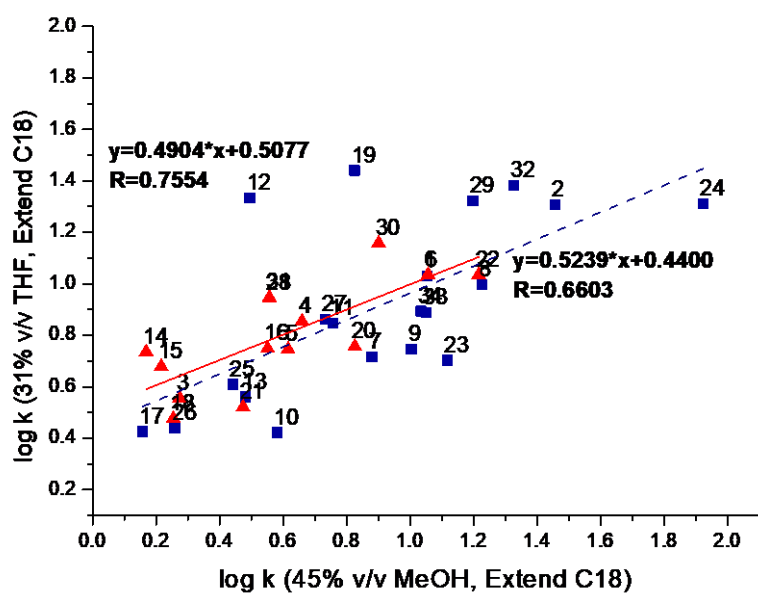


Figure S14. Log k in 31% v/v THF plotted against log k in 45% v/v MeOH. Extend C18 stationary phase. Solute numbers as in Table 2.

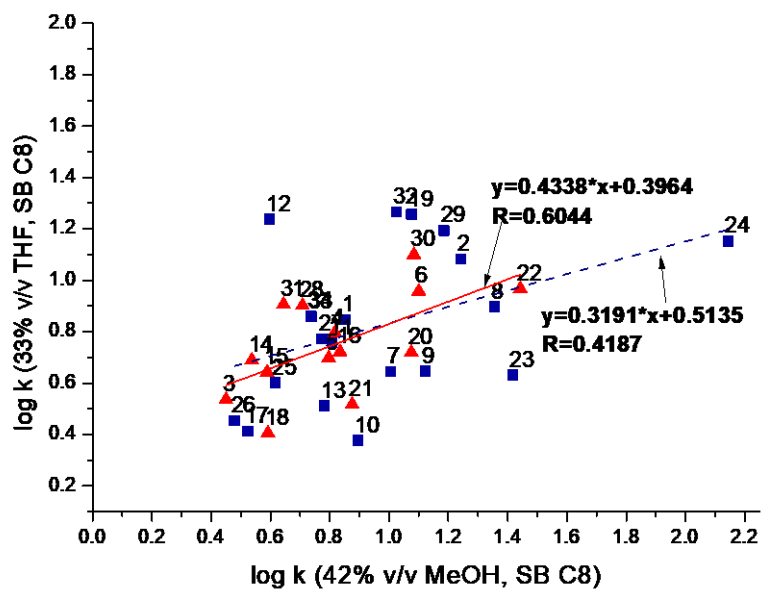


Figure S15. Log k in 33% v/v THF plotted against log k in 42% v/v MeOH. SB C8 stationary phase. Solute numbers as in Table 2.

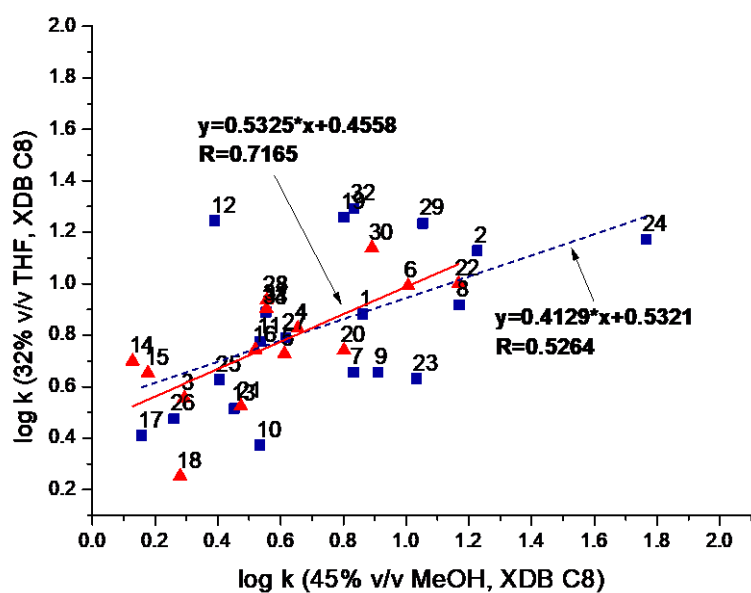


Figure S16. $\log k$ in 32% v/v THF plotted against $\log k$ in 45% v/v MeOH. XDB C8 stationary phase. Solute numbers as in Table 2.

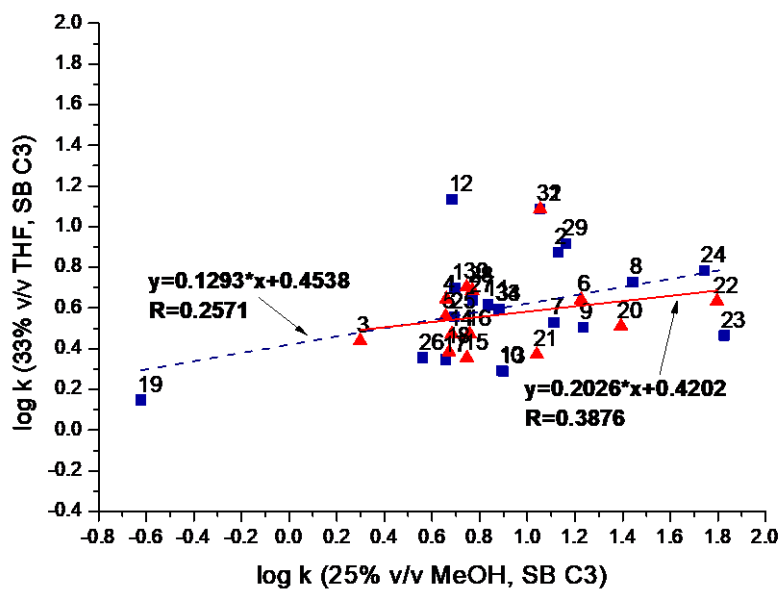


Figure S17. $\log k$ in 33% v/v THF plotted against $\log k$ in 25% v/v MeOH. SB C3 stationary phase. Solute numbers as in Table 2.

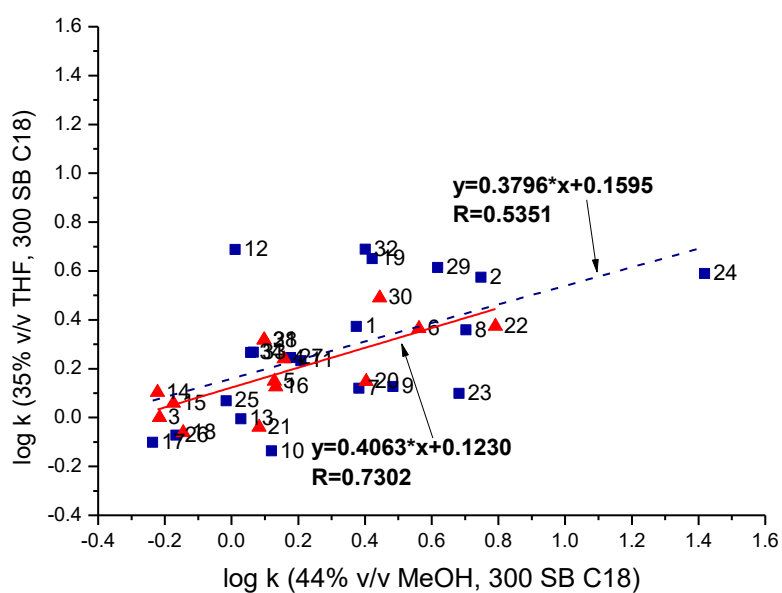


Figure S18. Log k in 35% v/v THF plotted against log k in 44% v/v MeOH. 300 SB C18 stationary phase. Solute numbers as in Table 2.

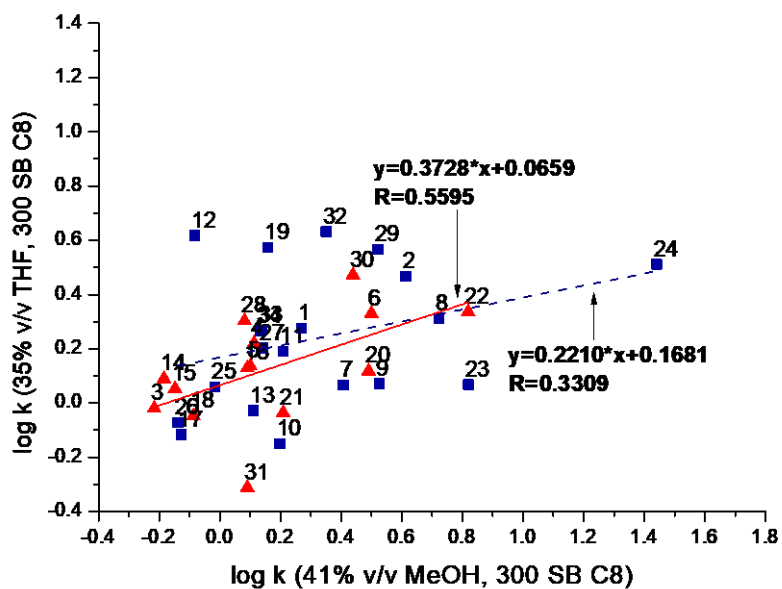


Figure S19. Log k in 35% v/v THF plotted against log k in 41% v/v MeOH. 300 SB C8 stationary phase. Solute numbers as in Table 2.

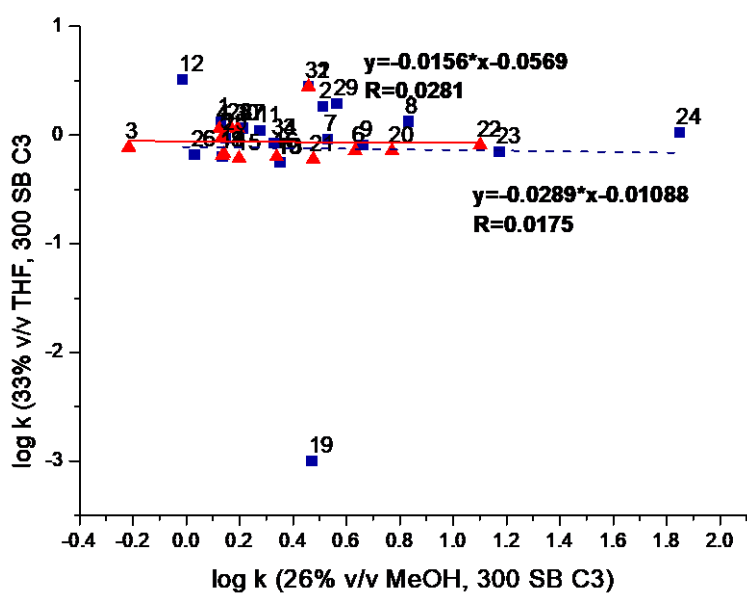


Figure S20. $\log k$ in 33% v/v ACN plotted against $\log k$ in 26% v/v MeOH. 300 SB C3 stationary phase. Solute numbers as in Table 2.

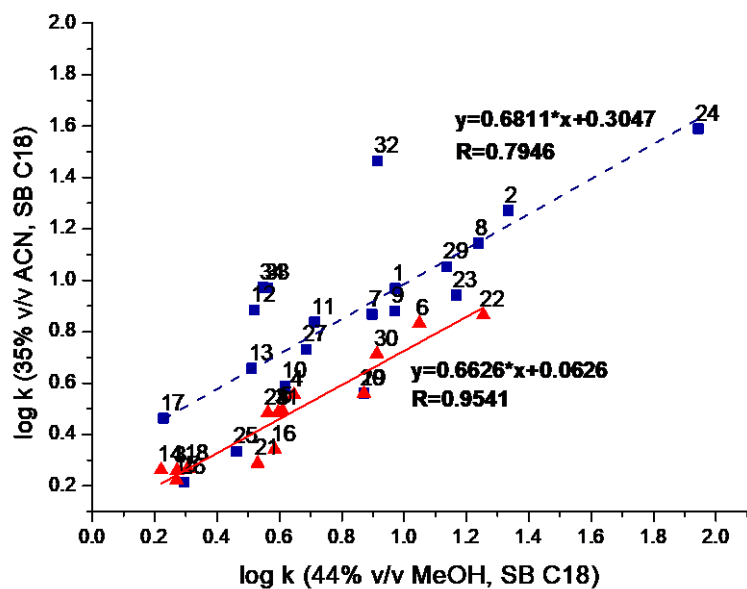


Figure S21. $\log k$ in 35% v/v ACN plotted against $\log k$ in 44% v/v MeOH. SB C18 stationary phase. Solute numbers as in Table 2.

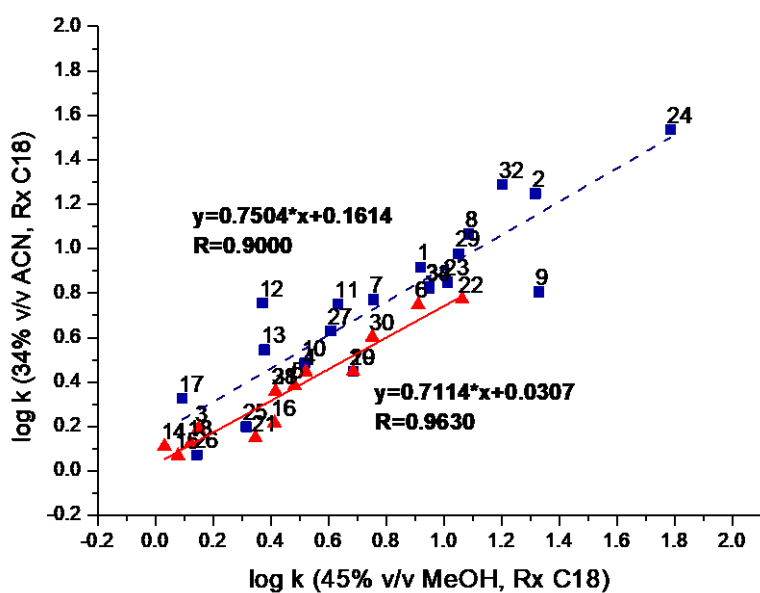


Figure S22. Log k in 34% v/v ACN plotted against log k in 45% v/v MeOH. Rx C18 stationary phase. Solute numbers as in Table 2.

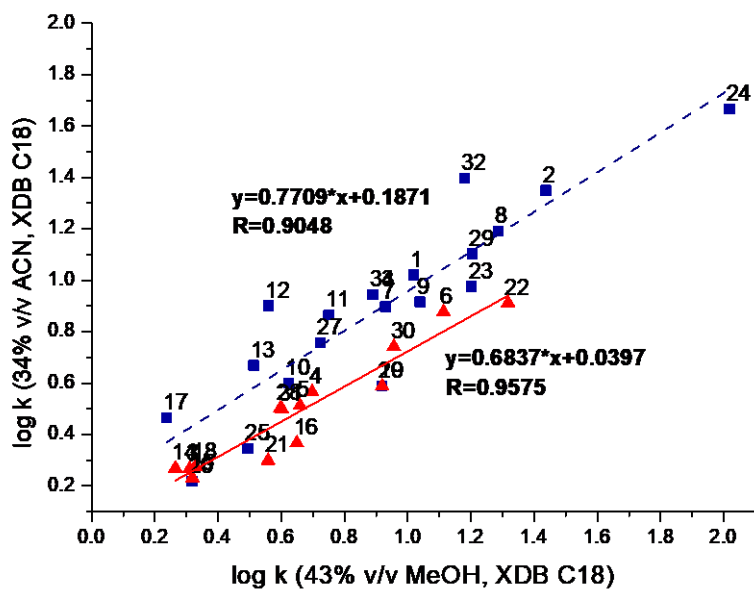


Figure S23. Log k in 34% v/v ACN plotted against log k in 43% v/v MeOH. Eclipse XDB C18 stationary phase. Solute numbers as in Table 2.

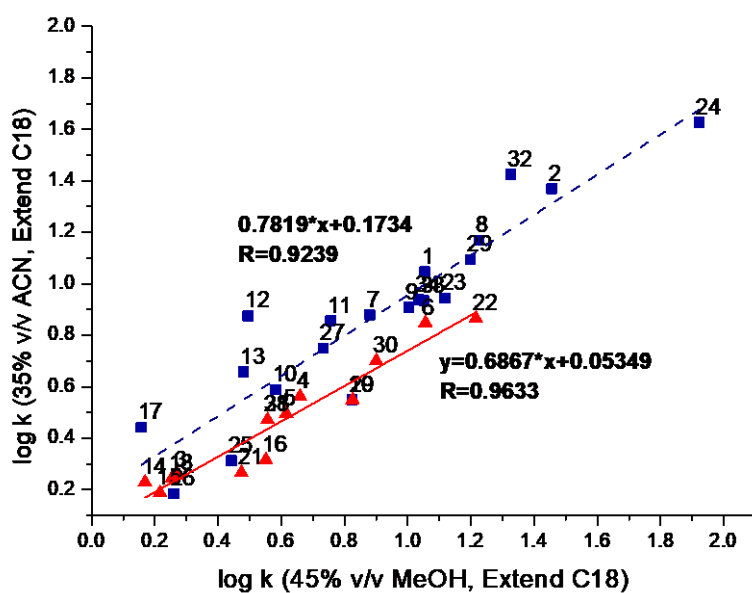


Figure S24. Log k in 35% v/v ACN plotted against log k in 45% v/v MeOH. Extend C18 stationary phase. Solute numbers as in Table 2.

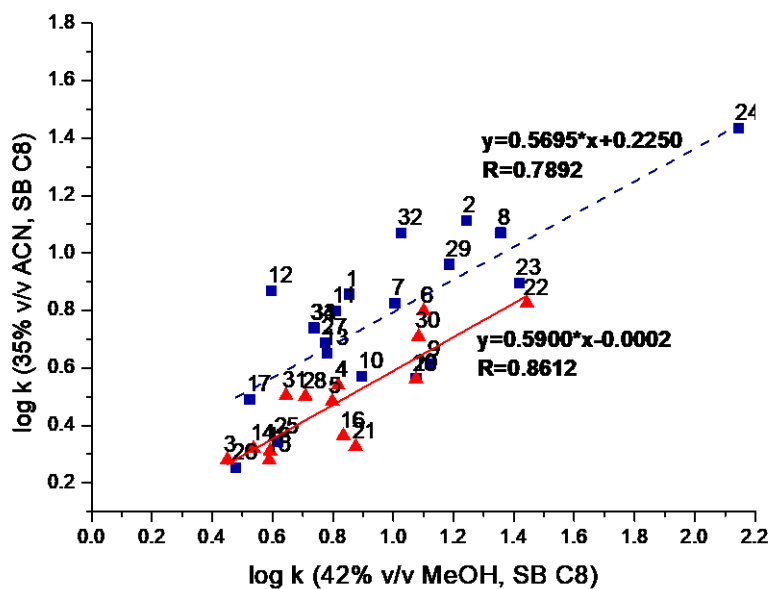


Figure S25. Log k in 35% v/v ACN plotted against log k in 42% v/v MeOH. SB C8 stationary phase. Solute numbers as in Table 2.

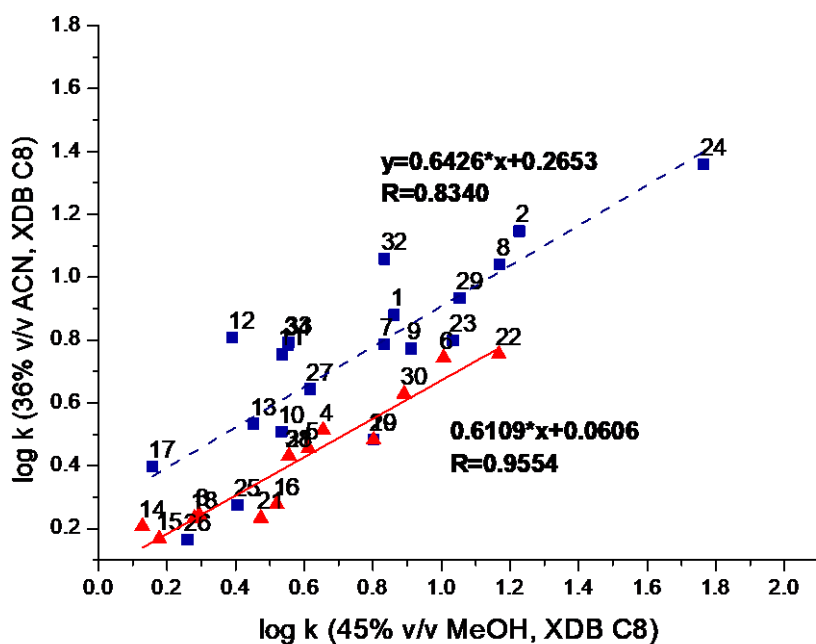


Figure S26. Log k in 36% v/v ACN plotted against log k in 45% v/v MeOH. Eclipse XDB C8 stationary phase. Solute numbers as in Table 2.

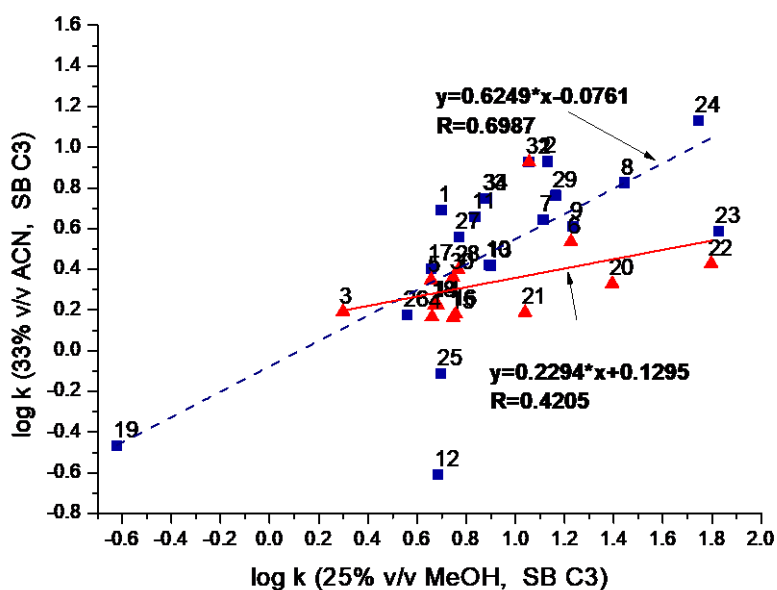


Figure S27. Log k in 33% v/v ACN plotted against log k in 25% v/v MeOH. SB C3 stationary phase. Solute numbers as in Table 2.

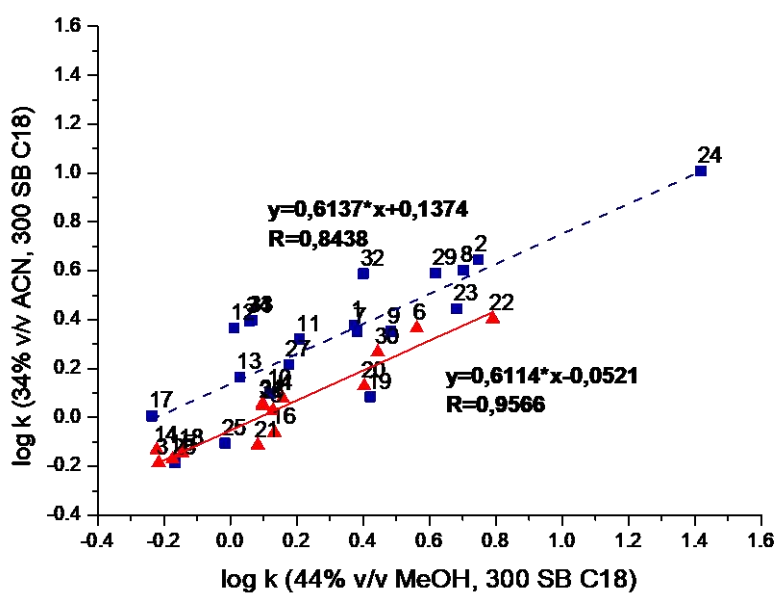


Figure S28. Log k in 34% v/v ACN plotted against log k in 44% v/v MeOH. 300 SB C18 stationary phase. Solute numbers as in Table 2.

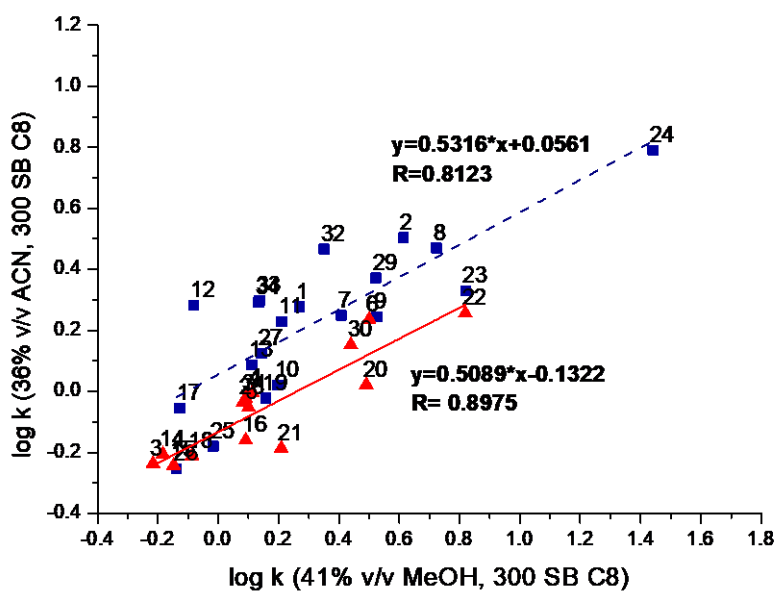


Figure S29. Log k in 36% v/v ACN plotted against log k in 41% v/v MeOH. 300 SB C8 stationary phase. Solute numbers as in Table 2.

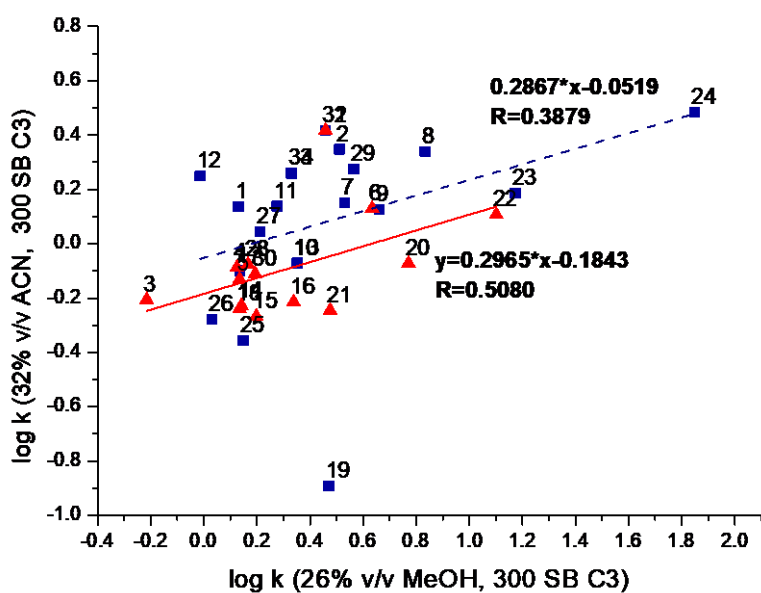







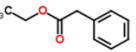
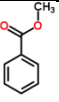



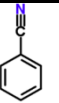
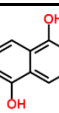


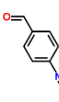

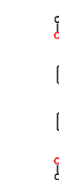
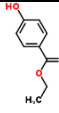
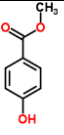
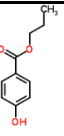
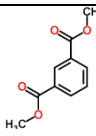
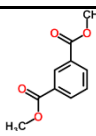
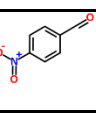
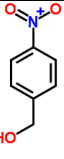
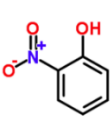
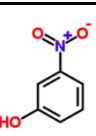
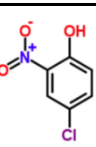
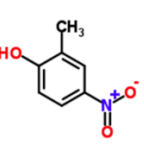
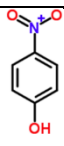


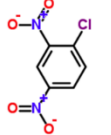
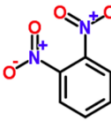
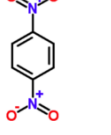
Figure S30. $\log k$ in 32% v/v ACN plotted against $\log k$ in 26% v/v MeOH. 300 SB C3 stationary phase. Solute numbers as in Table 2.

Table 1. Structural formulas of substances used in experiments.

Lp.	Substance	Structural formula
1	Benzene	
2	Toluene	
3	Phenol	
4	o-Cresol	
5	p-Cresol	
6	2-Naphtol	
7	Methyl phenylacetate	
8	Ethyl phenylacetate	

9	Methyl benzoate	
10	Acetophenone	
11	Nitrobenzene	
12	1,3,5-Trinitrobenzene	
13	Benzonitrile	
14	1,5-Dihydroksynaphtalene	
15	1,6-Dihydroksynaphtalene	
16	1,7-Dihydroksynaphtalene	
17	4-Cyanobenzaldehyde	
18	2-Cyanophenol	
19	Dimethyl-4,4'-diphenyl dicarboxylate	
20	Ethyl 4-hydroxybenzoate	

21	Methyl 4-hydroxybenzoate	
22	Propyl 4-hydroxybenzoate	
23	Dimethyl isophthalate	
24	Diethyl terephthalate	
25	4-Nitrobenzaldehyde	
26	4-Nitrobenzyl alcohol	
27	2-Nitrophenol	
28	3-Nitrophenol	
29	2-Nitro-4-chlorophenol	
30	2-Methyl-4-nitrophenol	
31	4-Nitrophenol	

32	1-Chloro-2,4-dinitrobenzene	 <p>The structure shows a benzene ring with a chlorine atom (Cl) at the 1-position, and nitro groups (NO₂) at the 2 and 4 positions. The nitro groups are drawn with a blue nitrogen atom double-bonded to two red oxygen atoms, one of which has a negative charge. The chlorine atom is shown in black.</p>
33	1,2-Dinitrobenzene	 <p>The structure shows a benzene ring with nitro groups (NO₂) at the 1 and 2 positions. The nitro groups are drawn with a blue nitrogen atom double-bonded to two red oxygen atoms, one of which has a negative charge.</p>
34	1,4-Dinitrobenzene	 <p>The structure shows a benzene ring with nitro groups (NO₂) at the 1 and 4 positions. The nitro groups are drawn with a blue nitrogen atom double-bonded to two red oxygen atoms, one of which has a negative charge.</p>

