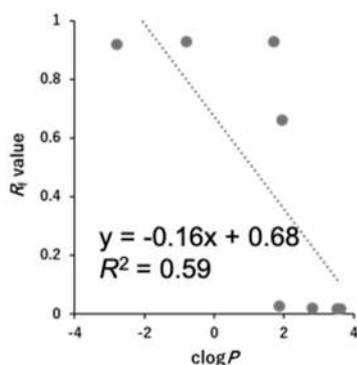


Supplementary material for

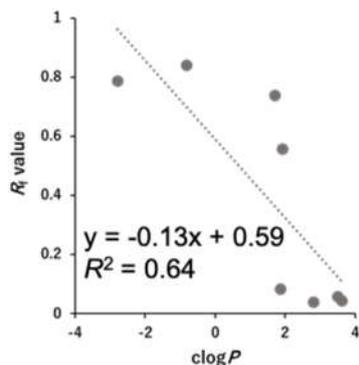
# Phenylcarbamate-modified paper for paper chromatographic analysis of hydrophobic compounds

Bungo Ochiai, Seiya Koseki and Yoshimasa Matsumura

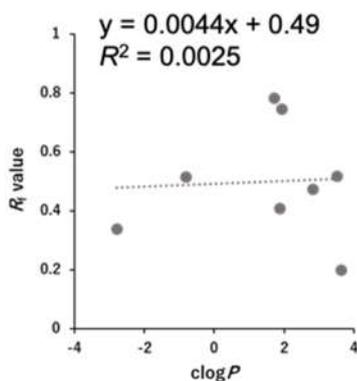
(a) water



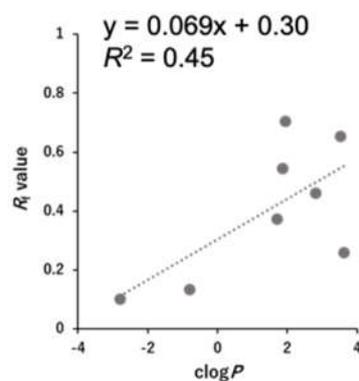
(b) water/methanol = 3/2



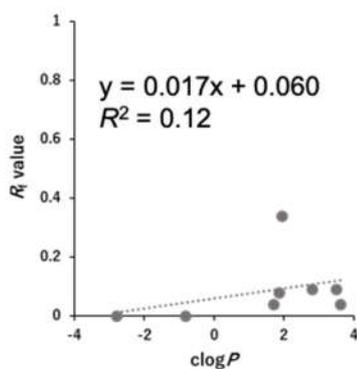
(c) isopropanol/water = 3/2



(d) isopropanol/water = 3/1



(e) isopropanol/water = 9/1



(f) acetone/water = 9/1

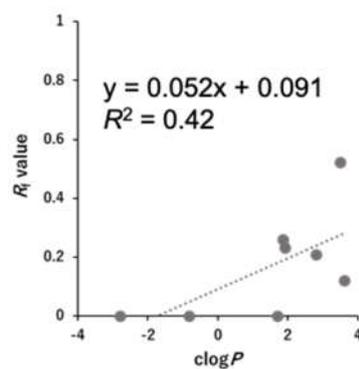
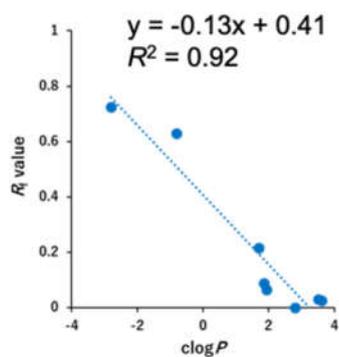
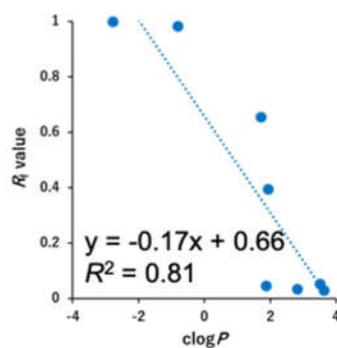


Figure S1. Correlation between  $\text{clog}P$  and  $R_f$  values in development on FP eluted by (a) water, (b) water/methanol = 3/2, (c) isopropanol/water = 3/2, (d) isopropanol/water = 3/1, (e) isopropanol/water = 9/1, and (f) acetone/water = 9/1.

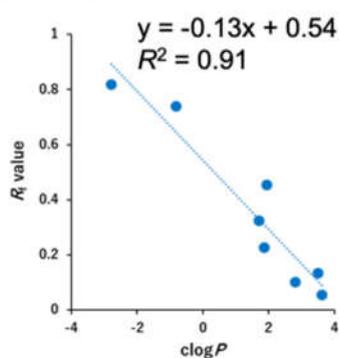
(a) water



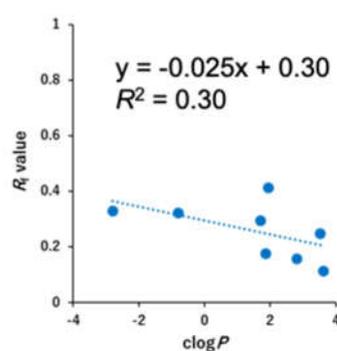
(b) water/methanol = 3/2



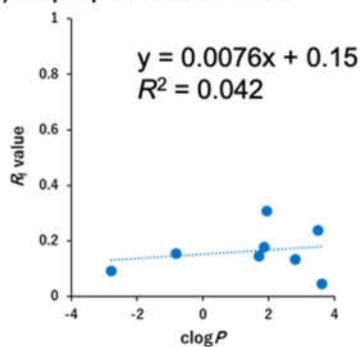
(c) isopropanol/water = 3/2



(d) isopropanol/water = 3/1



(e) isopropanol/water = 9/1



(f) acetone/water = 9/1

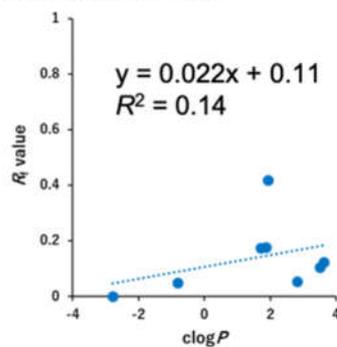
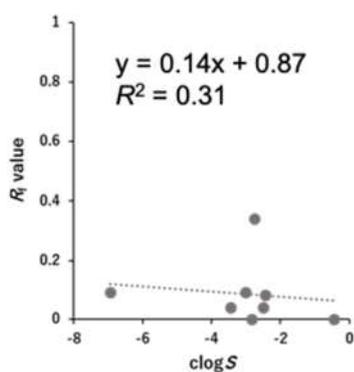
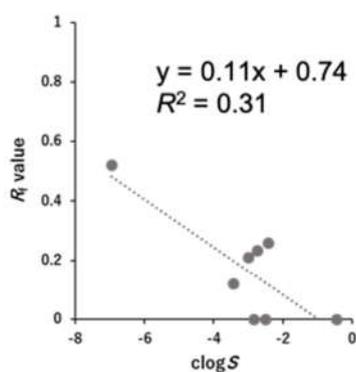


Figure S2. Correlation between  $\text{clog}P$  and  $R_f$  values in development on PI-FP eluted by (a) water, (b) water/methanol = 3/2, (c) isopropanol/water = 3/2, (d) isopropanol/water = 3/1, (e) isopropanol/water = 9/1, and (f) acetone/water = 9/1.

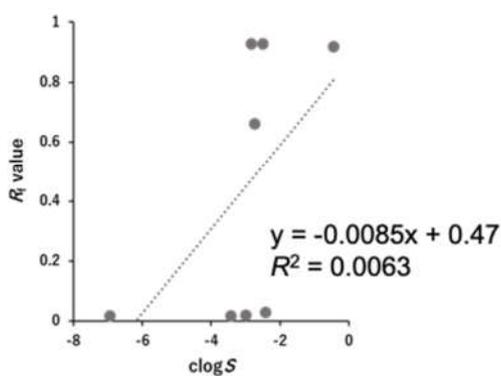
(a) water



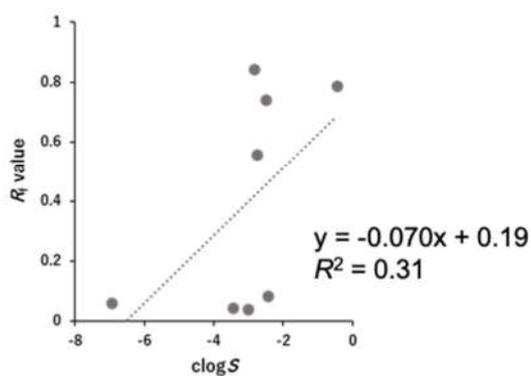
(b) water/methanol = 3/2



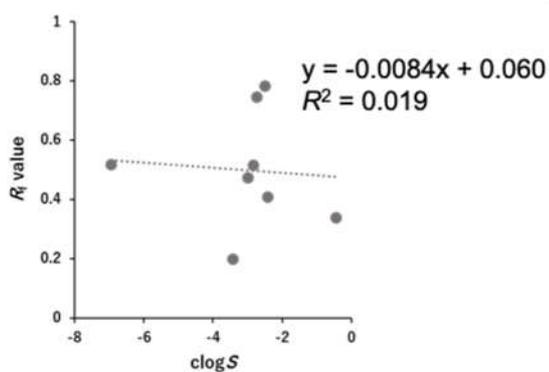
(c) isopropanol/water = 3/2



(d) isopropanol/water = 3/1



(e) isopropanol/water = 9/1



(f) acetone/water = 9/1

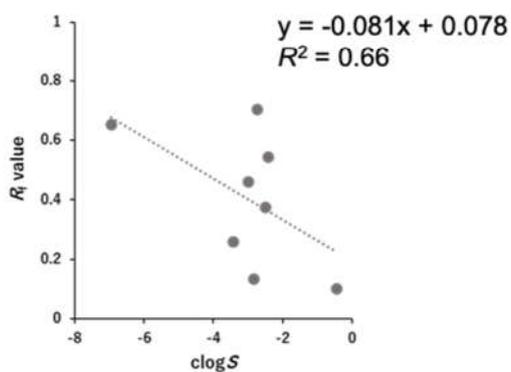
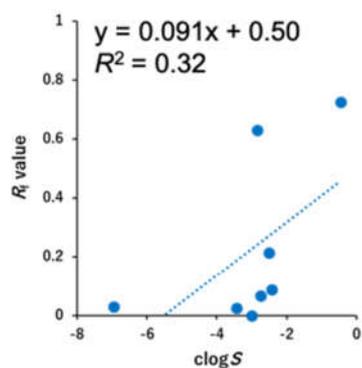
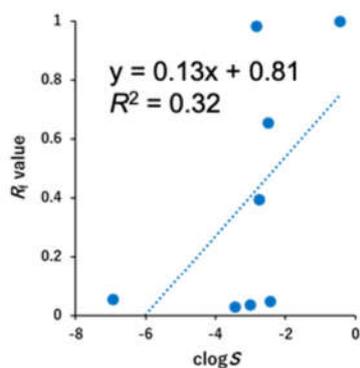


Figure S3. Correlation between  $\text{clog}S$  and  $R_f$  values in development on FP eluted by (a) water, (b) water/methanol = 3/2, (c) isopropanol/water = 3/2, (d) isopropanol/water = 3/1, (e) isopropanol/water = 9/1, and (f) acetone/water = 9/1.

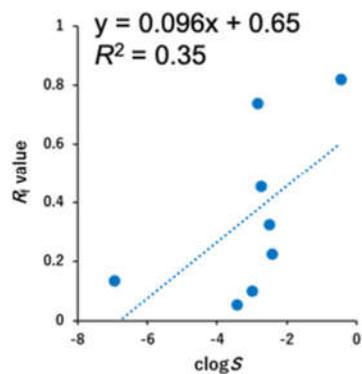
(a) water



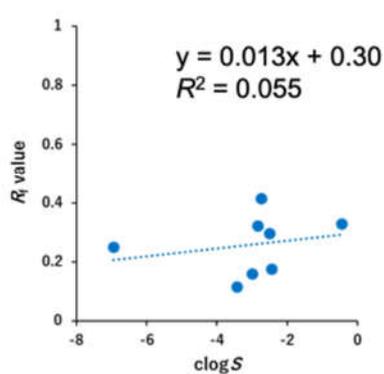
(b) water/methanol = 3/2



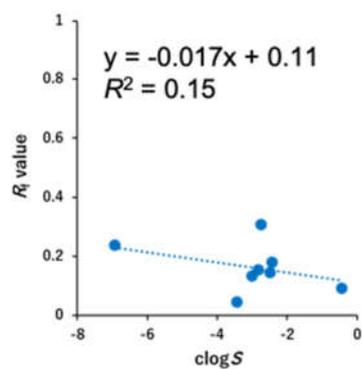
(c) isopropanol/water = 3/2



(d) isopropanol/water = 3/1



(e) isopropanol/water = 9/1



(f) acetone/water = 9/1

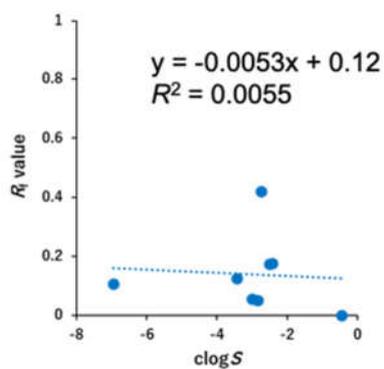
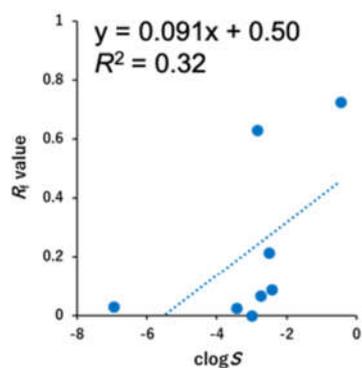
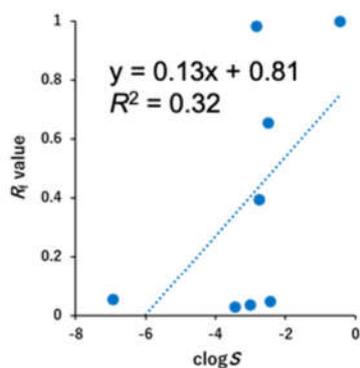


Figure S4. Correlation between  $\text{clog}S$  and  $R_f$  values in development on PI-FP eluted by (a) water, (b) water/methanol = 3/2, (c) isopropanol/water = 3/2, (d) isopropanol/water = 3/1, (e) isopropanol/water = 9/1, and (f) acetone/water = 9/1.

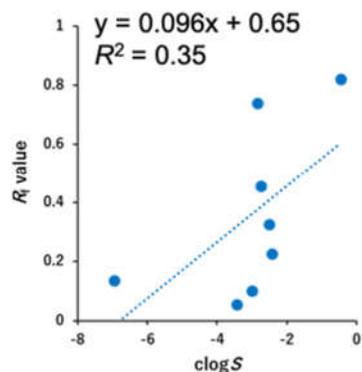
(a) water



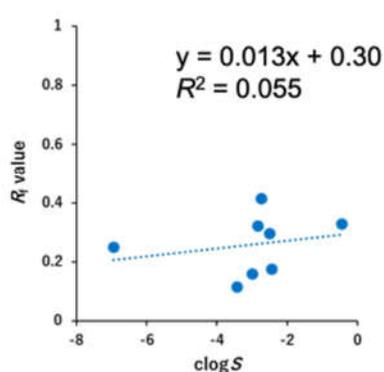
(b) water/methanol = 3/2



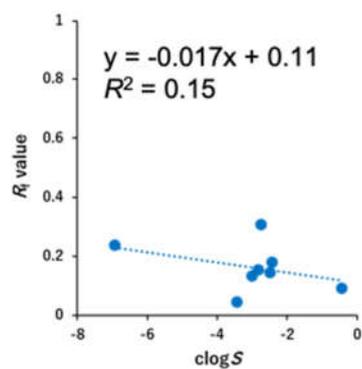
(c) isopropanol/water = 3/2



(d) isopropanol/water = 3/1



(e) isopropanol/water = 9/1



(f) acetone/water = 9/1

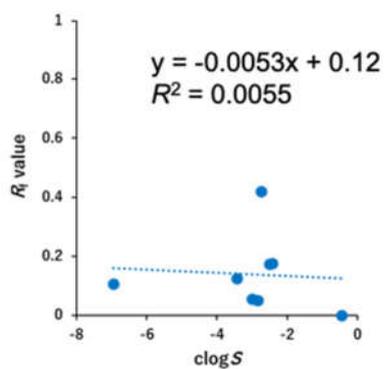
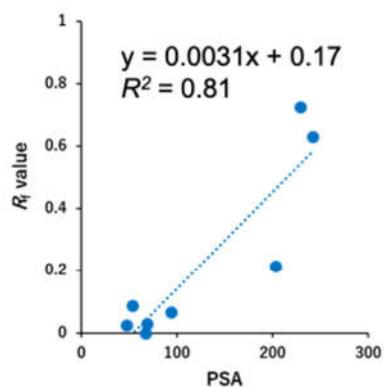
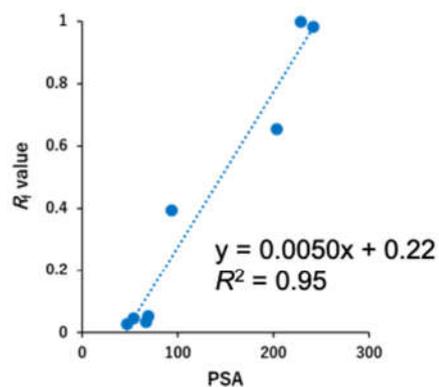


Figure S5. Correlation between PSA and  $R_f$  values in development on FP eluted by (a) water, (b) water/methanol = 3/2, (c) isopropanol/water = 3/2, (d) isopropanol/water = 3/1, (e) isopropanol/water = 9/1, and (f) acetone/water = 9/1.

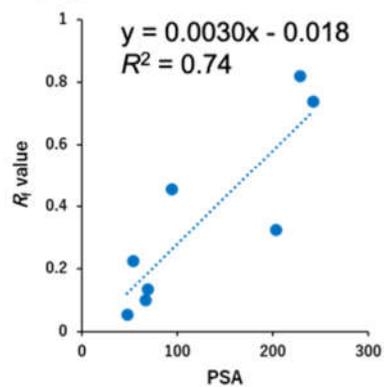
(a) water



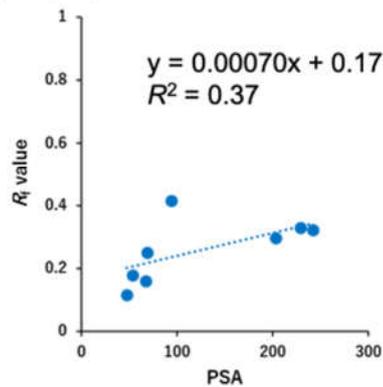
(b) water/methanol = 3/2



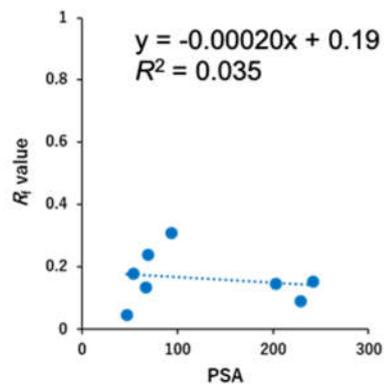
(c) isopropanol/water = 3/2



(d) isopropanol/water = 3/1



(e) isopropanol/water = 9/1



(f) acetone/water = 9/1

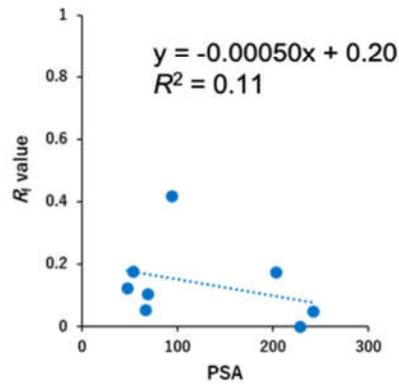


Figure S6. Correlation between PSA and  $R_f$  values in development on PI-FP eluted by (a) water, (b) water/methanol = 3/2, (c) isopropanol/water = 3/2, (d) isopropanol/water = 3/1, (e) isopropanol/water = 9/1, and (f) acetone/water = 9/1.

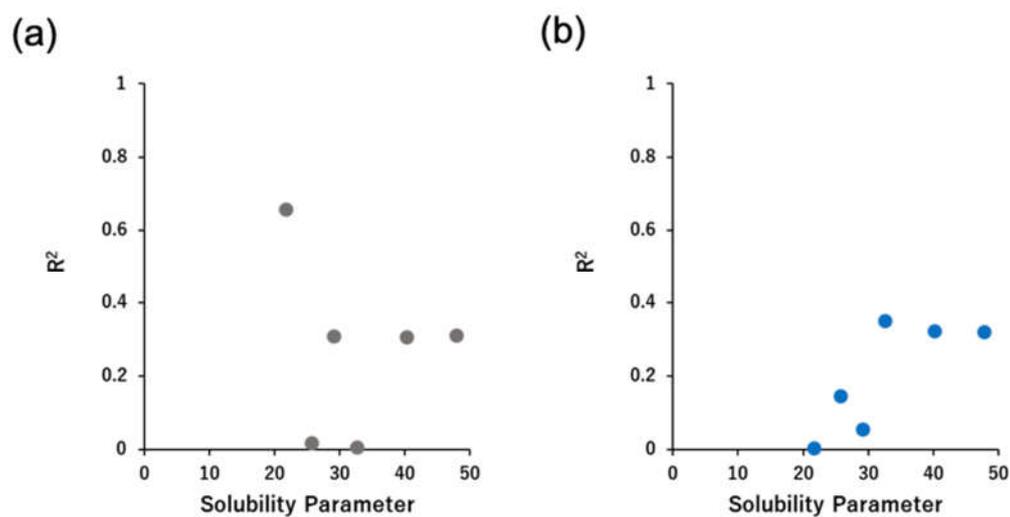


Figure S7. Relationship between solubility parameter of eluent and  $R^2$  of correlation between  $\text{clogS}$  and  $R_t$  value in developments using (a) FP and (b) PI-FP.

**Table S1.**  $\text{clogS}$  and PSA of analytes.

Analytes	$\text{clogS}^{\text{a)}$	PSA <sup>a)</sup>
Tartrazine	-0.45	229
New Coccine	-2.84	242
Brilliant Blue fcf	-2.50	203
Basic Red 5	-2.44	53.4
Methyl Orange	-2.75	93.5
Basic Blue 17	-3.01	66.7
Basic Red 2	-6.95	68.8
Methylene Blue	-3.44	47.1