Supporting Information

Effects of Different Weak Small Organic Acids on Clofazimine Solubility in Aqueous Media

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CONTENTS

Table S1. Clofazimine (CFZ) solubility in solutions of 2 M and 5 M tartaric acid in water at 25°C. Experimental details, stirring time, pH values and solubilities expressed as molar and mg/mL concentrations are also given. 2

Table S2. Clofazimine (CFZ) solubility in solutions of 2 M and 5 M malic acid in water at 25°C. Experimental details, stirring time, pH values and solubilities expressed as molar and mg/mL concentrations are also given. 3

Table S3. Clofazimine (CFZ) solubility in solutions of 2 M and 5 M glutaric acid in water at 25°C. Experimental details, stirring time, pH values and solubilities expressed as molar and mg/mL concentrations are also given. 4

Figure S1. HPLC Chromatograms of CFZ external standard solutions 5

Figure S2. Calibration diagram for CFZ 6

Table S1. Clofazimine (CFZ) solubility in solutions of 2 M and 5 M tartaric acid in water at 25°C. Experimental details, stirring time, pH values and solubilities expressed as molar and mg/mL concentrations are also given.

Vial	*c*(acid) (M)	*V* (mL)	*m*(Cfz) (mg)	Stirring time (h)	pH			*S*(Cfz) (M)	*S*(Cfz) (mg/mL)
					Before CFZ addition	Before phase separation	After phase separation		
1	2.00	1.000	14.98	1	1.0	0.9	0.8	5.5×10^{-4}	0.26
2	2.00	1.000	14.81	2	1.0	1.0	0.9	4.6×10^{-4}	0.22
3	2.00	1.000	14.15	3	1.0	1.0	1.0	5.1×10^{-4}	0.24
4	2.00	1.000	15.97	4	1.0	1.0	1.0	5.0×10^{-4}	0.24
5	2.00	1.000	14.87	5	1.0	1.1	0.9	4.7×10^{-4}	0.22
6	2.00	1.000	15.03	6	1.0	1.0	1.0	6.4×10^{-5}	0.03
7	2.00	1.000	14.38	6+18 [a]	1.0	1.1	1.1	8.0×10^{-5}	0.04
8	5.00	1.000	15.58	1	0.2	0.2	0.1	5.9×10^{-4}	0.28
9	5.00	1.000	15.11	2	0.2	0.2	0.1	5.3×10^{-4}	0.25
10	5.00	1.000	15.89	3	0.2	0.2	0.2	5.3×10^{-4}	0.25
11	5.00	1.000	14.85	4	0.2	0.2	0.2	5.1×10^{-4}	0.24
12	5.00	1.000	14.58	5	0.2	0.2	0.2	6.3×10^{-4}	0.30
13	5.00	1.000	15.94	6	0.2	0.3	0.2	5.5×10^{-4}	0.26
14	5.00	1.000	15.02	6+18[a]	0.2	0.3	0.2	4.9×10^{-4}	0.23

[a] Stirring time + sedimentation time.

Table S2. Clofazimine (CFZ) solubility in solutions of 2 M and 5 M malic acid in water at 25°C. Experimental details, stirring time, pH values and solubilities expressed as molar and mg/mL concentrations are also given.

Vial	*c*(acid) (M)	*V* (mL)	*m*(CFZ) (mg)	Stirring time (h)	pH			*S*(CFZ) (M)	*S*(CFZ) (mg/mL)
					Before CFZ addition	Before phase separation	After phase separation		
1	2.00	1.000	15.91	1	1.4	1.4	1.4	1.8×10^{-4}	0.08
2	2.00	1.000	15.98	2	1.4	1.3	1.3	3.2×10^{-4}	0.15
3	2.00	1.000	15.95	3	1.4	1.4	1.4	2.5×10^{-4}	0.12
4	2.00	1.000	14.33	4	1.4	1.4	1.4	3.3×10^{-4}	0.16
5	2.00	1.000	14.43	5	1.4	1.4	1.4	3.0×10^{-4}	0.14
6	2.00	1.000	14.32	6	1.4	1.4	1.4	2.1×10^{-4}	0.10
7	2.00	1.000	14.27	6+18 [a]	1.4	1.4	1.4	1.7×10^{-4}	0.08
8	5.00	1.000	15.19	1	0.6	0.6	0.5	6.2×10^{-3}	2.9
9	5.00	1.000	14.53	2	0.6	0.7	0.6	3.7×10^{-3}	1.8
10	5.00	1,000	15.85	3	0.6	0.7	0.6	3.9×10^{-3}	1.9
11	5.00	1.000	15.77	4	0.6	0.8	0.6	3.8×10^{-3}	1.8
12	5.00	1.000	15.61	5	0.6	0.7	0.6	3.9×10^{-3}	1.9
13	5.00	1.000	15.90	6	0.6	0.6	0.6	4.0×10^{-3}	1.9
14	5.00	1.000	15.89	6+18[a]	0.6	0.6	0.5	3.2×10^{-3}	1.5

[a] Stirring time + sedimentation time.

Table S3. Clofazimine (CFZ) solubility in solutions of 2 M and 5 M glutaric acid in water at 25°C. Experimental details, stirring time, pH values and solubilities expressed as molar and mg/mL concentrations are also given.

Vial	*c*(acid) (M)	*V* (mL)	*m*(CFZ) (mg)	Stirring time (h)	pH			*S*(CFZ) (M)	*S*(CFZ) (mg/mL)
					Before CFZ addition	Before phase separation	After phase separation		
1	2.00	1.000	15.50	1	1.9	1.9	1.7	6.2×10^{-4}	0.29
2	2.00	1.000	15.09	2	1.9	1.9	1.8	5.4×10^{-4}	0.25
3	2.00	1.000	15.87	3	1.9	1.9	1.9	5.6×10^{-4}	0.26
4	2.00	1.000	14.57	4	1.9	1.9	1.9	5.7×10^{-4}	0.27
5	2.00	1.000	15.22	5	1.9	1.9	1.9	5.5×10^{-4}	0.26
6	2.00	1.000	14.42	6	1.9	1.9	2.0	6.0×10^{-4}	0.28
7	2.00	1.000	14.96	6+18 [a]	1.9	1.9	1.9	6.5×10^{-4}	0.32
8	5.00	1.000	50.66	1	1.2	1.5	1.5	2.0×10^{-2}	9.5
9	5.00	1.000	49.38	2	1.2	1.5	1.5	1.8×10^{-2}	8.6
10	5.00	1.000	49.37	3	1.2	1.5	1.5	1.8×10^{-2}	8.7
11	5.00	1.000	50.53	4	1.2	1.5	1.5	1.9×10^{-2}	9.1
12	5.00	1.000	50.25	5	1.2	1.5	1.5	1.9×10^{-2}	8.9
13	5.00	1.000	50.91	6	1.2	1.5	1.6	2.0×10^{-2}	9.4
14	5.00	1.000	50.95	6+18 [a]	1.2	1.5	1.5	1.9×10^{-2}	9.1

[a] Stirring time + sedimentation time.

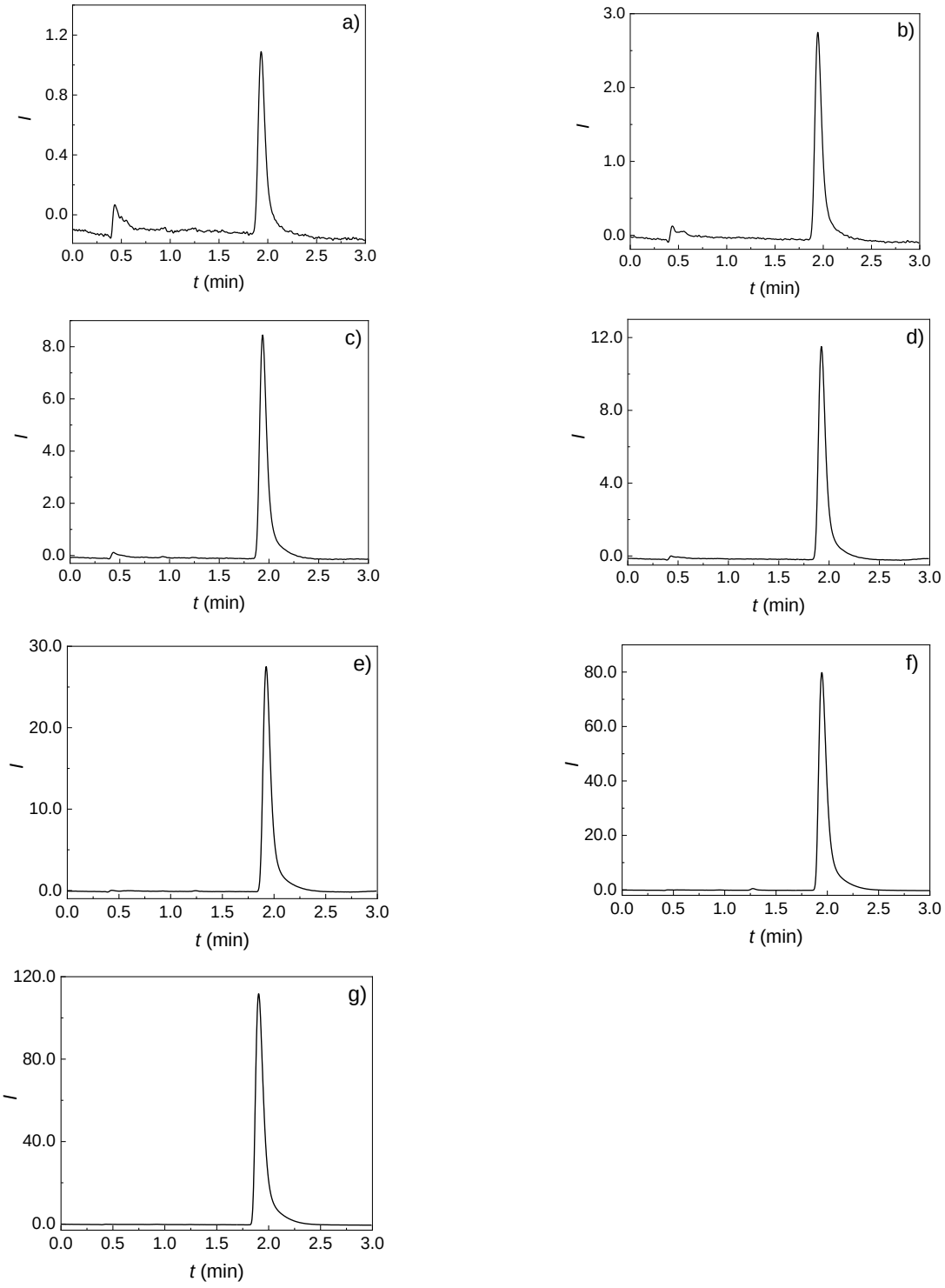


Figure S1. HPLC Chromatograms of CFZ external standard solutions with following concentrations: **a**) 1.00×10^{-6} M, **b**) 2.50×10^{-6} M, **c**) 7.50×10^{-6} M, **d**) 1.00×10^{-5} M, **e**) 2.50×10^{-5} M, **f**) 7.50×10^{-5} M, **g**) 1.00×10^{-4} M.

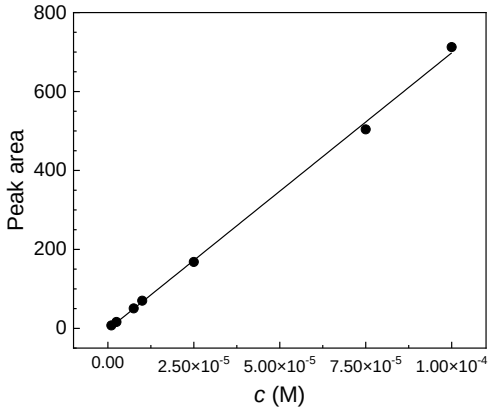


Figure S2. Calibration diagram for CFZ (concentration range 1.00×10^{-6} – 1.00×10^{-4} M) Linear fit: Peak area = $7.01\times10^{6}\times c - 2.83$ ($r^2 = 0.998$)