

Supporting information

Fast determination of five chiral antipsychotic drugs using dispersive liquid– liquid microextraction combined with capillary electrophoresis

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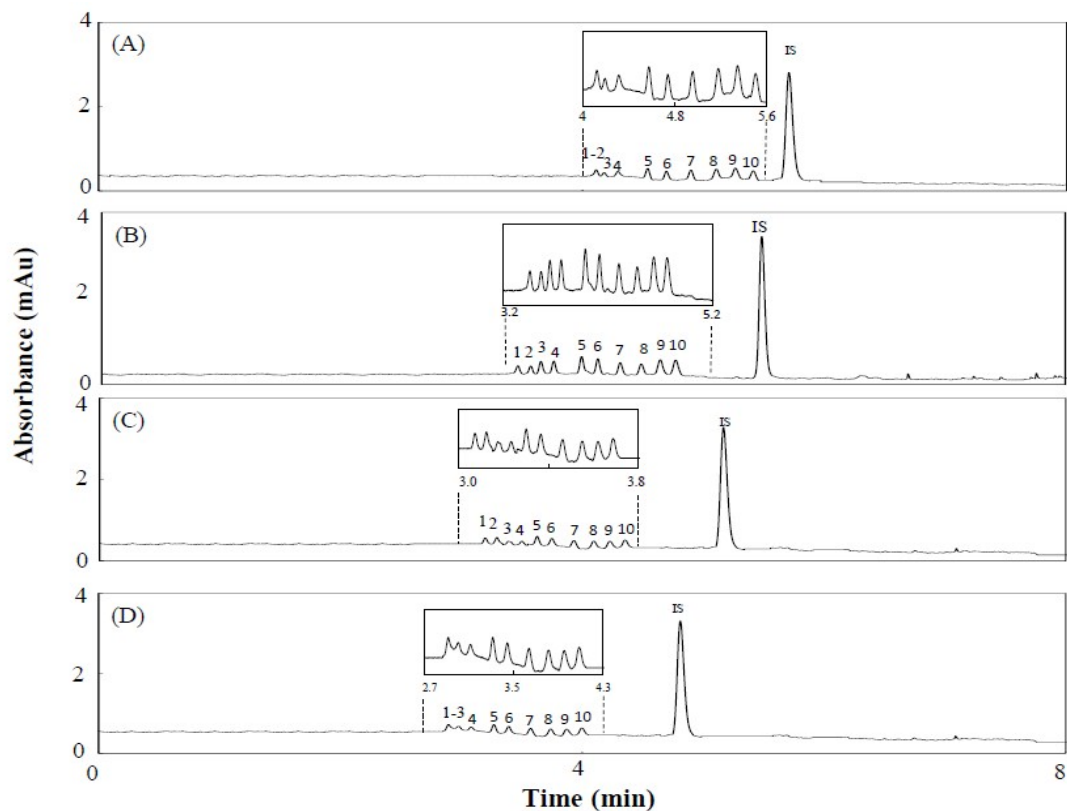


Fig. S1 Effect of pH on the CE enantioseparation of 5 pairs of D,L-phenothiazines. pH: (A) 2.5, (B) 3.0, (C) 3.5, and (D) 4.0. Electrophoresis conditions: separation buffer, 150 mM formic acid, 0.9% PDDAC and 5 mM Hp- γ -CD; applied voltage, -8.5 kV; hydrodynamic injection at 20-cm height for 10 s; and UV detection at 254 nm. Peak identities (5 μ M): 1. D-Thi, 2. L-Thi, 3. D-Met, 4. L-Met, 5. D-Tri, 6. L-Tri, 7. D-Eth, 8. L-Eth, 9. D-Pro, 10. L-Pro.

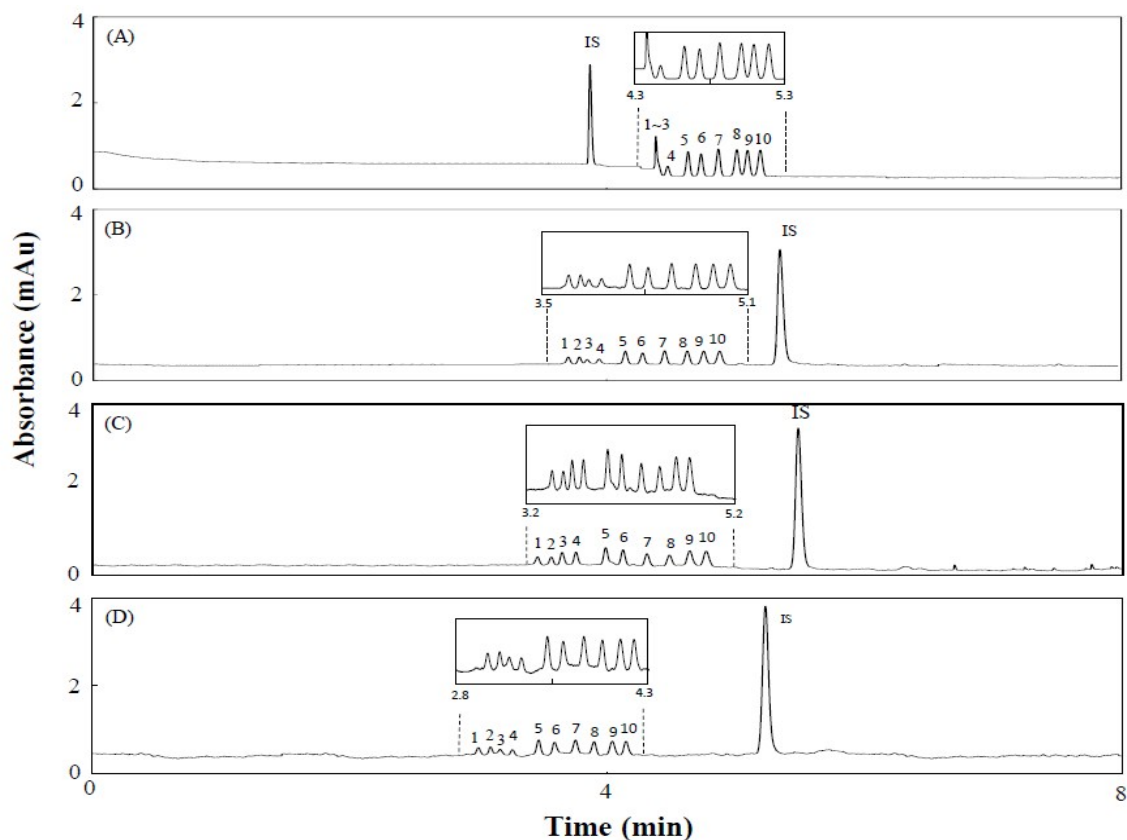


Fig. S2 Effect of PDDAC concentration on the CE separation of 5 pairs of DL-phenothiazines: (A) 0, (B) 0.6, (C) 0.6, and (D) 1.2% PDDAC into the background electrolyte. Electrophoresis conditions: 33 cm capillary (23 cm to detector); separation buffer, 150 mM formic acid (pH 3.0), and 5 mM HP- γ -CD; applied voltage, -8.5 kV; hydrodynamic injection at 20-cm height for 10 s; and UV detection at 254 nm. Peak identities (5 μ M): 1. D-Thi, 2. L-Thi, 3. D-Met, 4. L-Met, 5. D-Tri, 6. L-Tri, 7. D-Eth, 8. L-Eth, 9. D-Pro, 10. L-Pro.

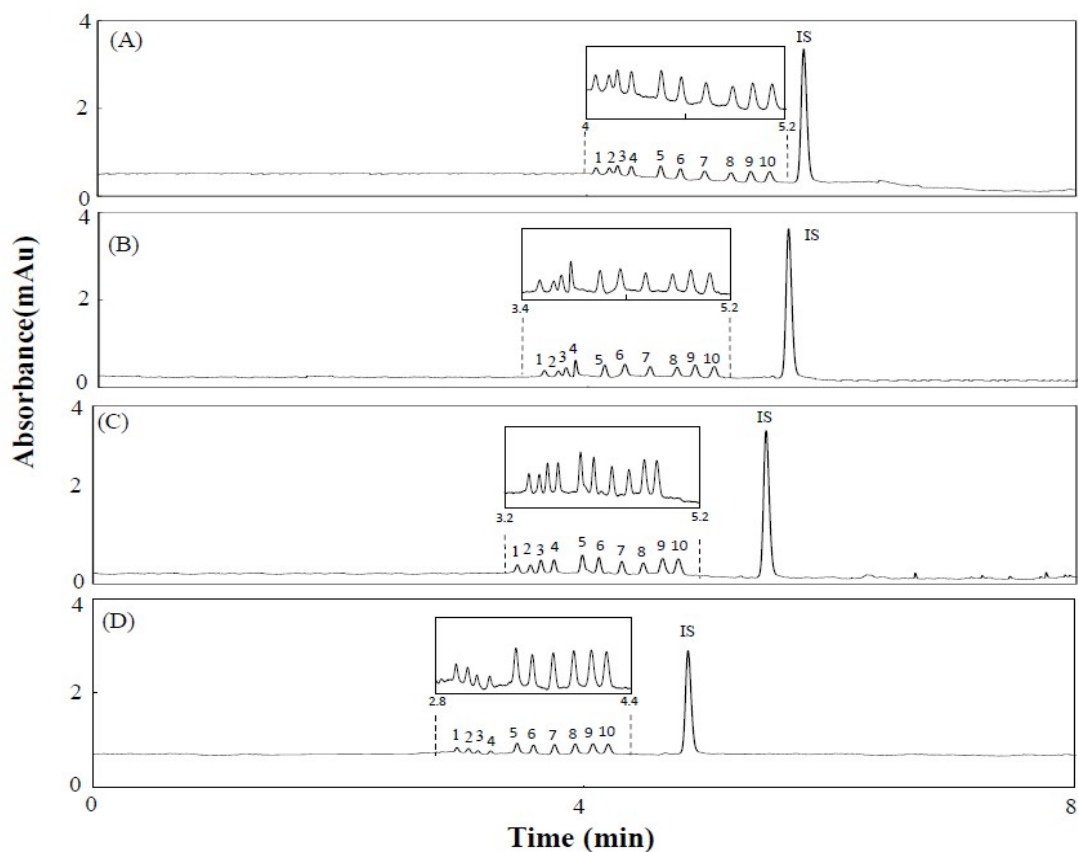


Fig. S3 Effect of the background electrolyte concentrations on CE separation of 5 pairs of DL-phenothiazines: (A) 50, (B) 100, (C) 150, and (D) 200 mM formic acid (pH 3.0) containing 0.9% PDDAC. Electrophoresis conditions: 33 cm capillary (23 cm to detector); applied voltage, -8.5 kV; hydrodynamic injection at 20-cm height for 10 s; and UV detection at 254 nm. Peak identities (5 μ M): 1. D-Thi, 2. L-Thi, 3. D-Met, 4. L-Met, 5. D-Tri, 6. L-Tri, 7. D-Eth, 8. L-Eth, 9. D-Pro, 10. L-Pro.

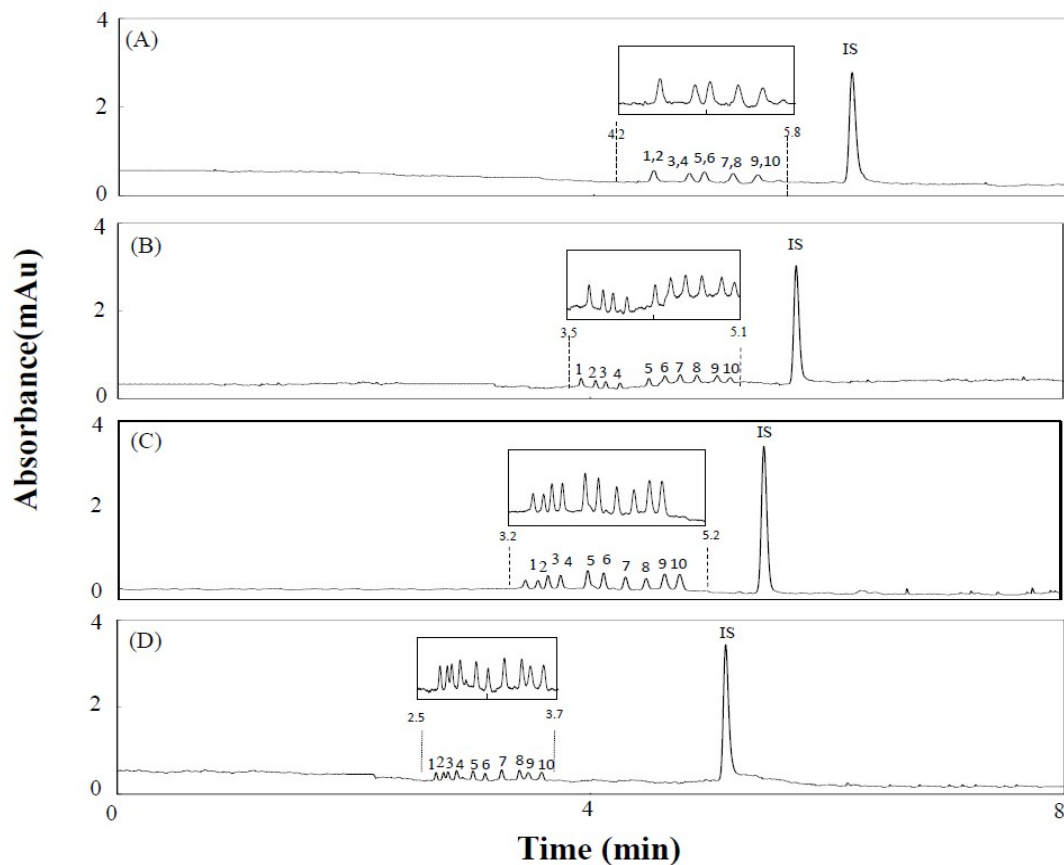


Fig. S4 Effect of the concentration of Hp- γ -CD on the CE enantioseparation of 5 pairs of DL-phenothiazines: (A) 0, (B) 2.5, (C) 5.0, and (D) 7.5 mM HP- γ -CD. 33 cm capillary (23 cm to detector); separation buffer, 150 mM formic acid (pH 3.0), 0.9% PDDAC and Hp- γ -CD; applied voltage, -8.5 kV; hydrodynamic injection at 20-cm height for 10 s; and UV detection at 254 nm. Peak identities (5 μ M): 1. D-Thi, 2. L-Thi, 3. D-Met, 4. L-Met, 5. D-Tri, 6. L-Tri, 7. D-Eth, 8. L-Eth, 9. D-Pro, 10. L-Pro.

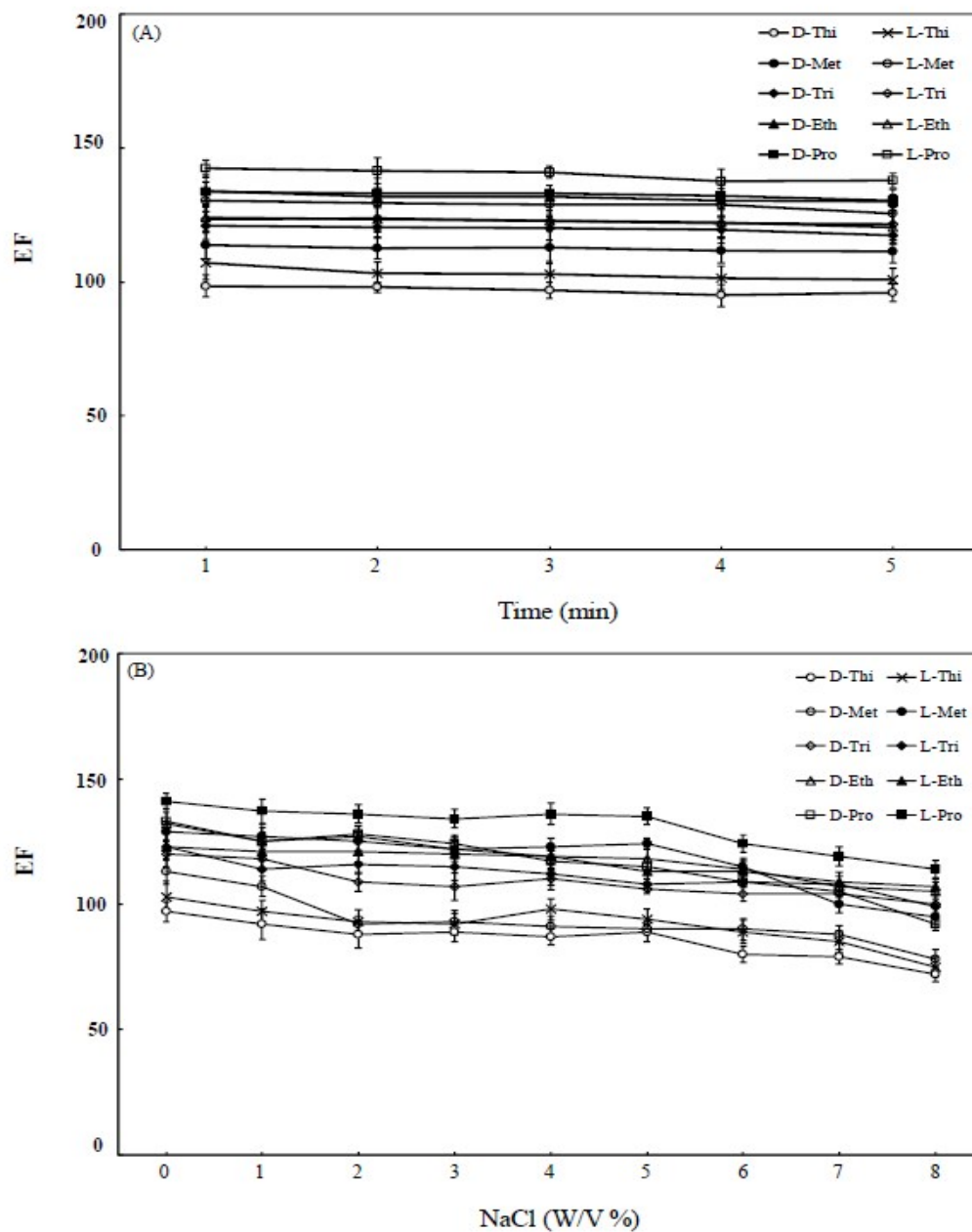


Fig. S5 Effect of experimental parameters on extraction efficiency of UA-DLLME:

(A) extraction time and (B) NaCl concentration. Extraction conditions: 200 μL of THF dispersive solvent containing 30 μL CHCl_3 extraction solvent was rapidly injected into 1 mL of sample solution (pH 10). (A) Without NaCl and (B) with NaCl concentrations from 0 to 8% (w/v); extraction time (A) from 1 to 5 min ; and (B) at 1 min.