

Fig. 15. Effect of the proportion of methanol in running buffer. Separation buffer, 100 mM SDS in 25 mM citric acid/disodium hydrogen phosphate buffer at pH 2.6; injection pressure, 0.5 p.s.i.; injection time, 90 s; effect length, 50 cm x 50 μ m I.D; applied voltage, -25 kV; detection wavelength, 210 nm; temperature, 25 $^{\circ}$ C; sample concentration, 1 mg/ L, sample dissolved in a sample matrix containing 25 mM of citric acid/disodium hydrogen phosphate.

- | | |
|------------------------------|-------------------------------|
| 1.n-Butyl p-hydroxybenzoate | 2.Isobutyl p-hydroxybenzoate |
| 3.n-Propyl p-hydroxybenzoate | 4.Isopropyl p-hydroxybenzoate |
| 5.Ethyl p-hydroxybenzoate | 6.Methyl p-hydroxybenzoate |

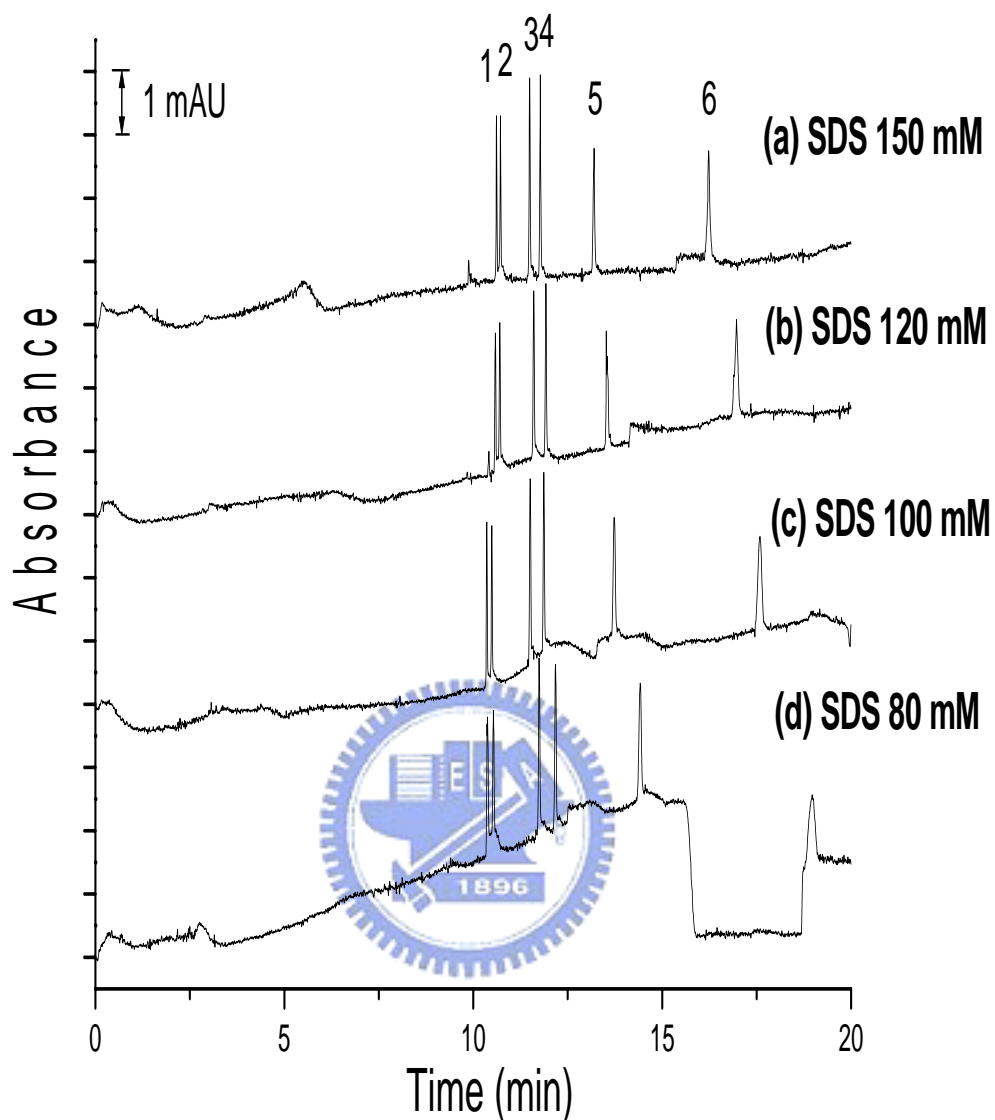


Fig. 16. Effect of the concentration of SDS in separation running buffer. Separation buffer, 30 % methanol in 25 mM citric acid/disodium hydrogen phosphate buffer at pH 2.6; injection pressure, 0.5 p.s.i.; injection time, 90 s; effect length, 50 cm x 50 μ m I.D; applied voltage, -25 kV; detection wavelength, 210 nm; temperature, 25 ; sample concentration, 1 mg/ L, sample dissolved in a sample matrix containing 25 mM of citric acid/disodium hydrogen phosphate.

- | | |
|------------------------------|-------------------------------|
| 1.n-Butyl p-hydroxybenzoate | 2.Isobutyl p-hydroxybenzoate |
| 3.n-Propyl p-hydroxybenzoate | 4.Isopropyl p-hydroxybenzoate |
| 5.Ethyl p-hydroxybenzoate | 6.Methyl p-hydroxybenzoate |

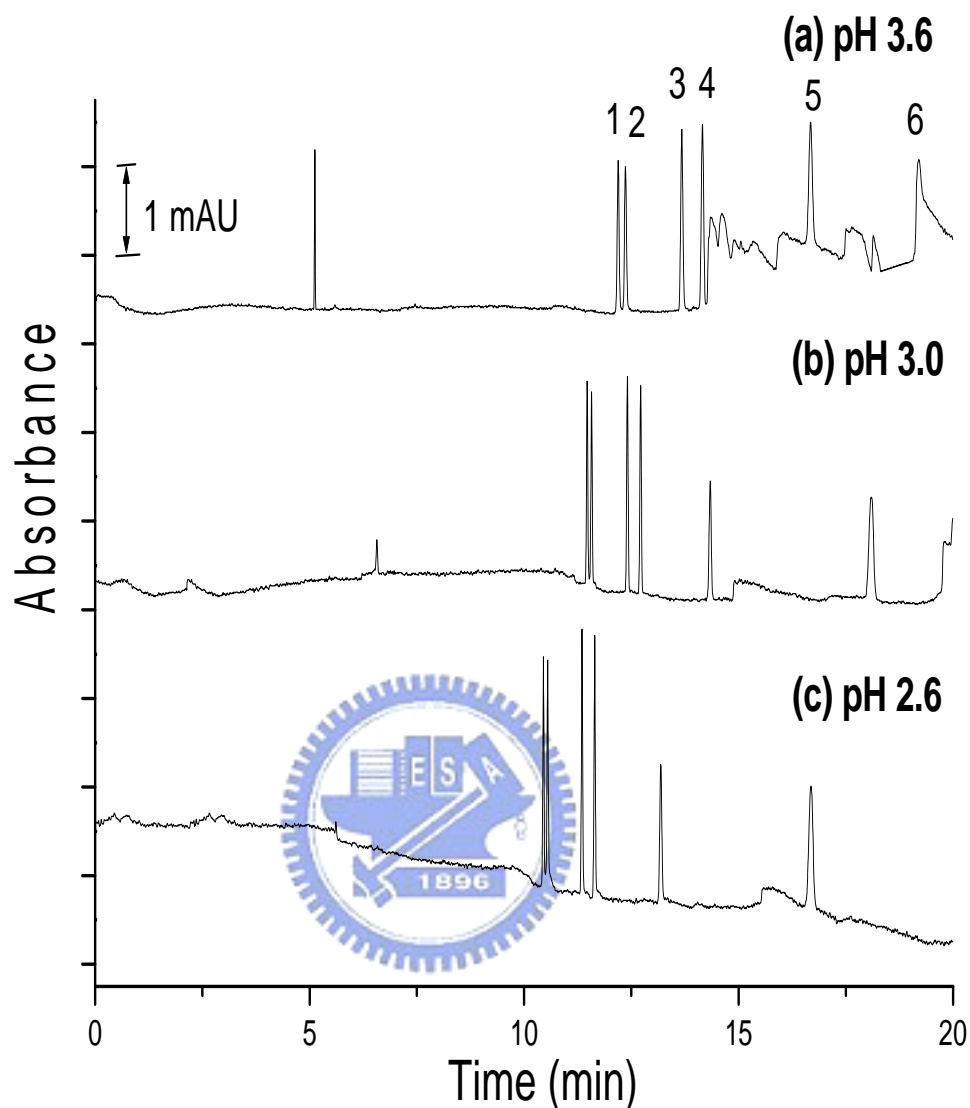


Fig. 17. Effect of the pH of separation running buffer.

Separation buffer, 150 mM SDS and 30% methanol in 25 mM citric acid/disodium hydrogen phosphate buffer; injection pressure, 0.5 p.s.i.; injection time, 90 s; effect length, 50 cm x 50 μ m I.D; applied voltage, -25 kV; detection wavelength, 210 nm; temperature, 25 ; sample concentration, 1 mg/L, sample dissolved in a sample matrix containing 25 mM of citric acid/disodium hydrogen phosphate.

- | | |
|------------------------------|-------------------------------|
| 1.n-Butyl p-hydroxybenzoate | 2.Isobutyl p-hydroxybenzoate |
| 3.n-Propyl p-hydroxybenzoate | 4.Isopropyl p-hydroxybenzoate |
| 5.Ethyl p-hydroxybenzoate | 6.Methyl p-hydroxybenzoate |

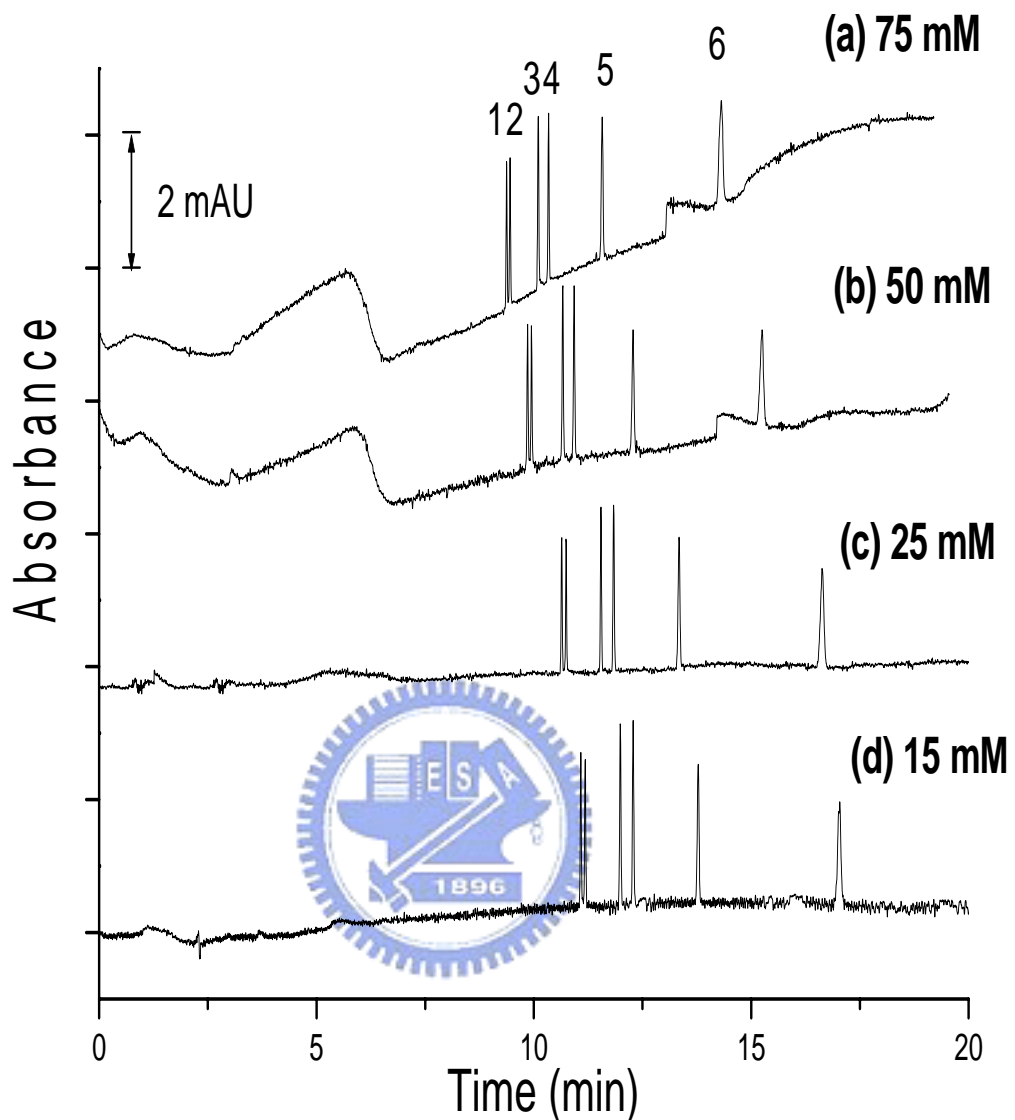


Fig. 18. Effect of the concentration of citric acid/disodium hydrogen phosphate running buffer. Separation buffer, 150 mM SDS and 30 % methanol at pH 2.6; injection pressure, 0.5 p.s.i.; injection time, 90 s; effect length, 50 cm x 50 μ m I.D; applied voltage, -25 kV; detection wavelength, 210 nm; temperature, 25 $^{\circ}$ C; sample concentration, 1 mg/L, sample dissolved in a sample matrix containing 25 mM of citric acid/disodium hydrogen phosphate.

- | | |
|------------------------------|-------------------------------|
| 1.n-Butyl p-hydroxybenzoate | 2.Isobutyl p-hydroxybenzoate |
| 3.n-Propyl p-hydroxybenzoate | 4.Isopropyl p-hydroxybenzoate |
| 5.Ethyl p-hydroxybenzoate | 6.Methyl p-hydroxybenzoate |

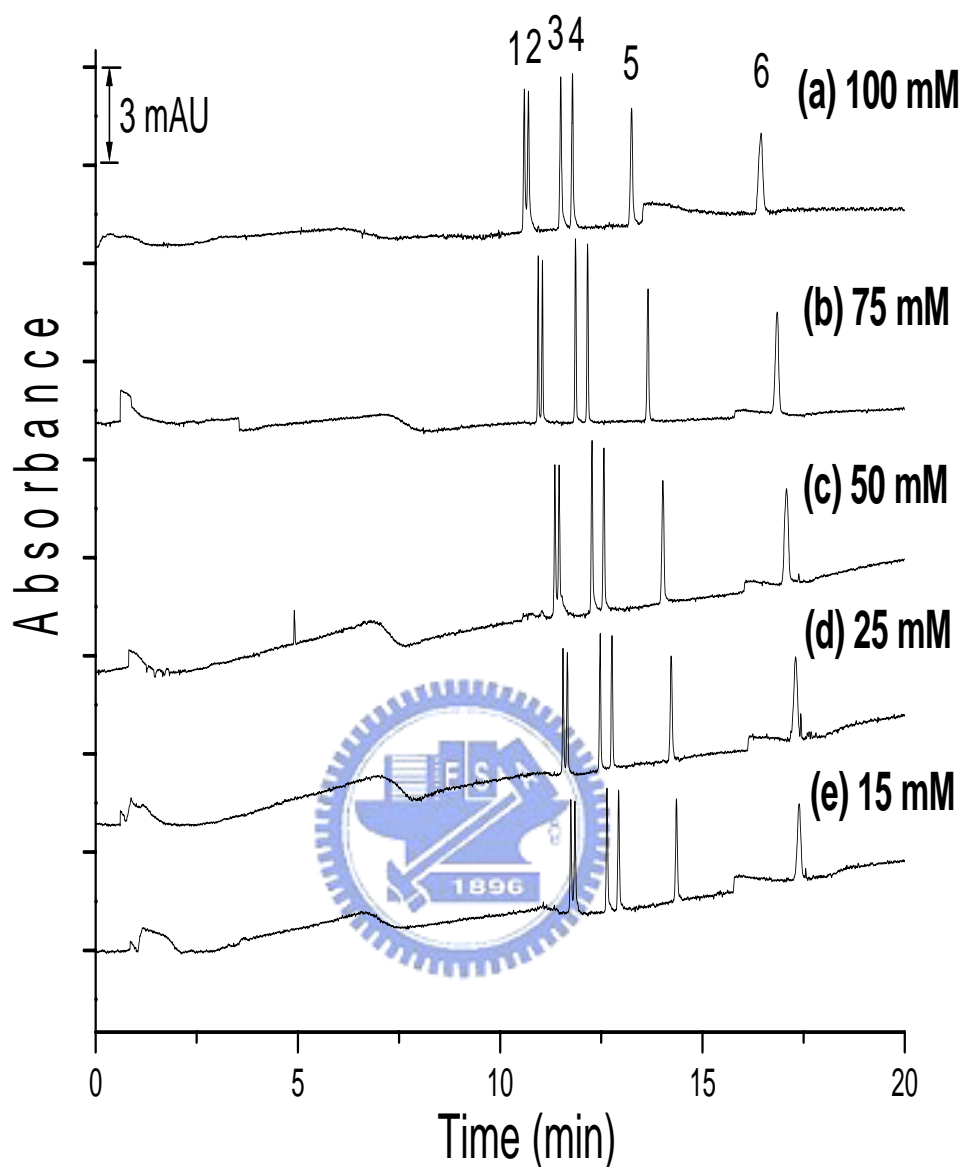


Fig. 19. Effect of the concentration of sample matrix.

Separation buffer, 150 mM SDS and 30 % methanol in 25 mM citric acid/disodium hydrogen phosphate buffer at pH 2.6; injection pressure, 0.5 p.s.i.; injection time, 90 s; effect length, 50 cm x 50 μ m I.D; applied voltage, -25 kV; detection wavelength, 210 nm; temperature, 25 ; sample concentration, 1 mg/L.

1.n-Butyl p-hydroxybenzoate
 3.n-Propyl p-hydroxybenzoate
 5.Ethyl p-hydroxybenzoate

2.Isobutyl p-hydroxybenzoate
 4.Isopropyl p-hydroxybenzoate
 6.Methyl p-hydroxybenzoate

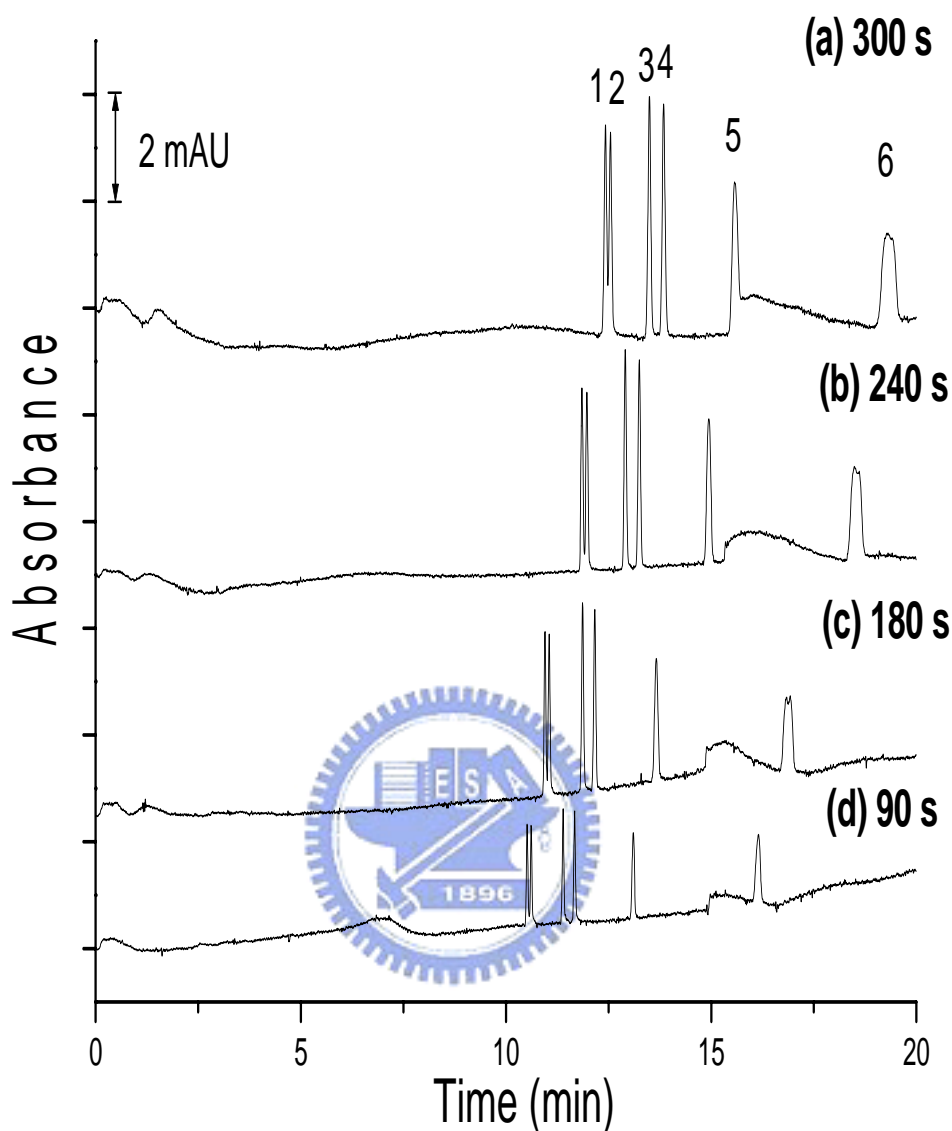


Fig. 20. Effect of injection time.

Separation buffer, 150 mM SDS and 30 % methanol in 25 mM citric acid/disodium hydrogen phosphate buffer at pH 2.6; injection pressure, 0.5 p.s.i.; effect length, 50 cm x 50 μ m I.D; applied voltage, -25 kV; detection wavelength, 210 nm; temperature, 25 $^{\circ}$ C; sample concentration, 1 mg/L, sample dissolved in a sample matrix containing 75 mM of citric acid/disodium hydrogen phosphate.

1.n-Butyl p-hydroxybenzoate
 3.n-Propyl p-hydroxybenzoate
 5.Ethyl p-hydroxybenzoate

2.Isobutyl p-hydroxybenzoate
 4.Isopropyl p-hydroxybenzoate
 6.Methyl p-hydroxybenzoate

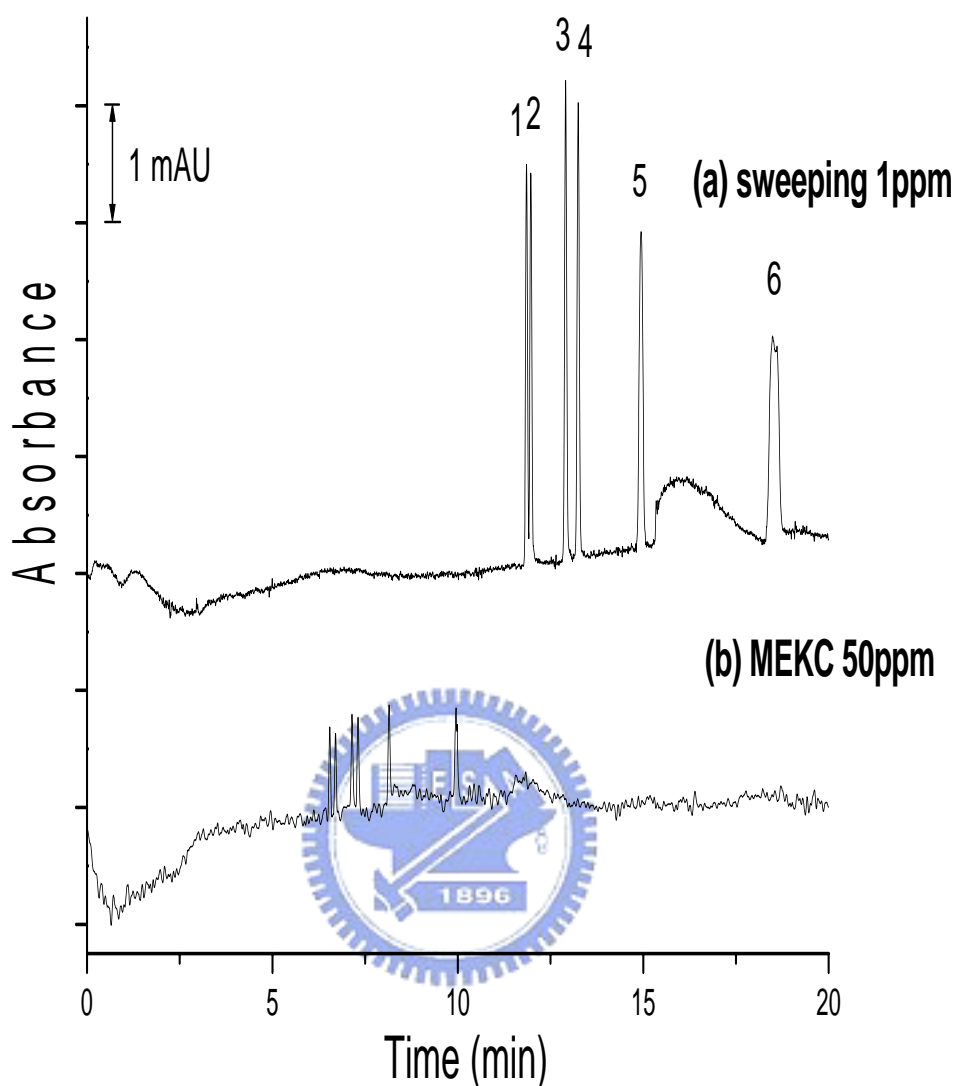


Fig. 21. Detection sensitivity of analytes measured under two different separation conditions. (a) without sweeping, injection pressure, 0.5 p.s.i.; injection time, 3 s; sample concentration, 50 mg/ L, (b) with sweeping Separation buffer, 150 mM SDS and 30% methanol in 25 mM citric acid/disodium hydrogen phosphate buffer at pH 2.6; injection pressure, 0.5 p.s.i.; injection time, 240 s; sample concentration, 1 mg/L, sample dissolved in a sample matrix containing 75 mM of citric acid/disodium hydrogen phosphate.

1.n-Butyl p-hydroxybenzoate
 3.n-Propyl p-hydroxybenzoate
 5.Ethyl p-hydroxybenzoate

2.Isobutyl p-hydroxybenzoate
 4.Isopropyl p-hydroxybenzoate
 6.Methyl p-hydroxybenzoate