

Fig.6-2 Effect of buffer solution pH on separation and stacking for benzodiazepines. BGE : 25 mM Borate Buffer, 70 mM CTAB, CH₃OH : 25 %(v/v) ; sample matrix, 25mM Borate, pH value the same as buffer condition. separative voltage : -25 KV ; injection time : 210 s ; effect length of capillary : 50 cm.; total length :37 cm; ID = 50 μ m ; On-line UV detection obtained at 230 nm.

Analytes(1ppm) 1.Bromazepam ,
 2.Estazolam ,3.Alprazolam ,4.Triazolam ,5.Flunitrazelam,
 6.Chlordiazepoxide, 7.Diazepam, 8.Clorazepate, 9.Nitrazepam

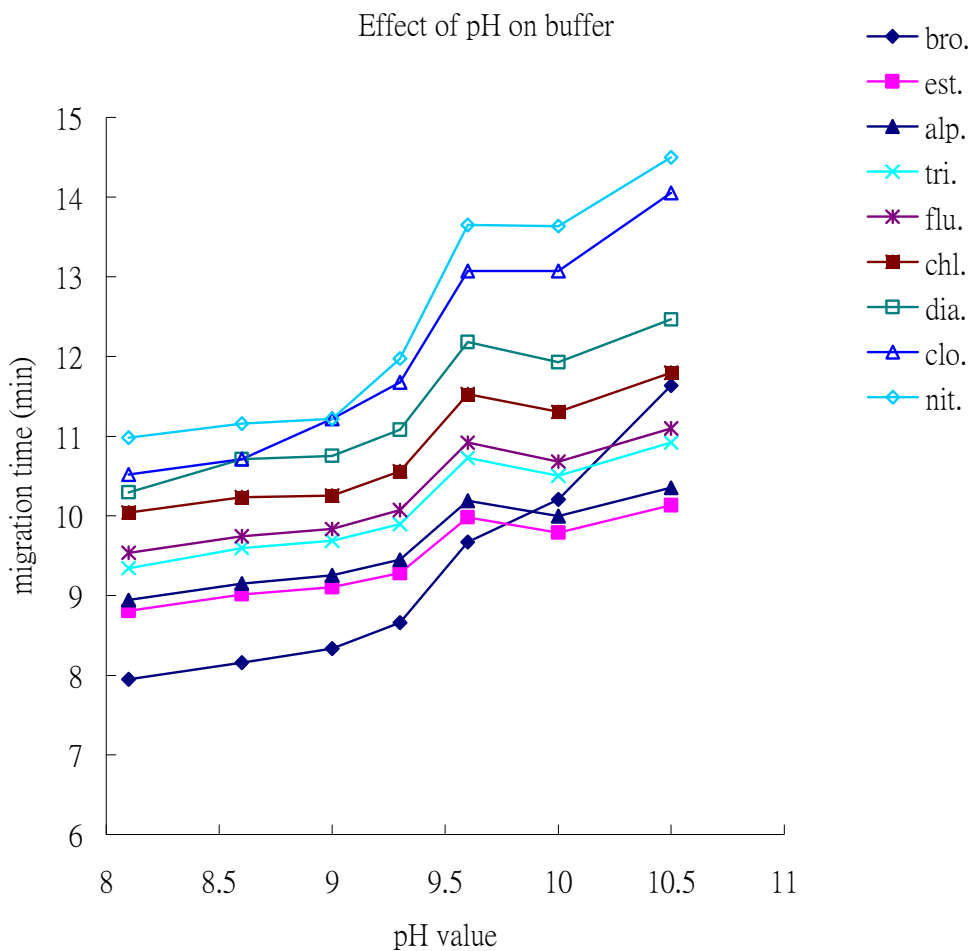


Fig.6-3 Variation of the migration time of benzodiazepines as a function of the buffer electrolyte pH. Other conditions as described in Fig. 6-2.

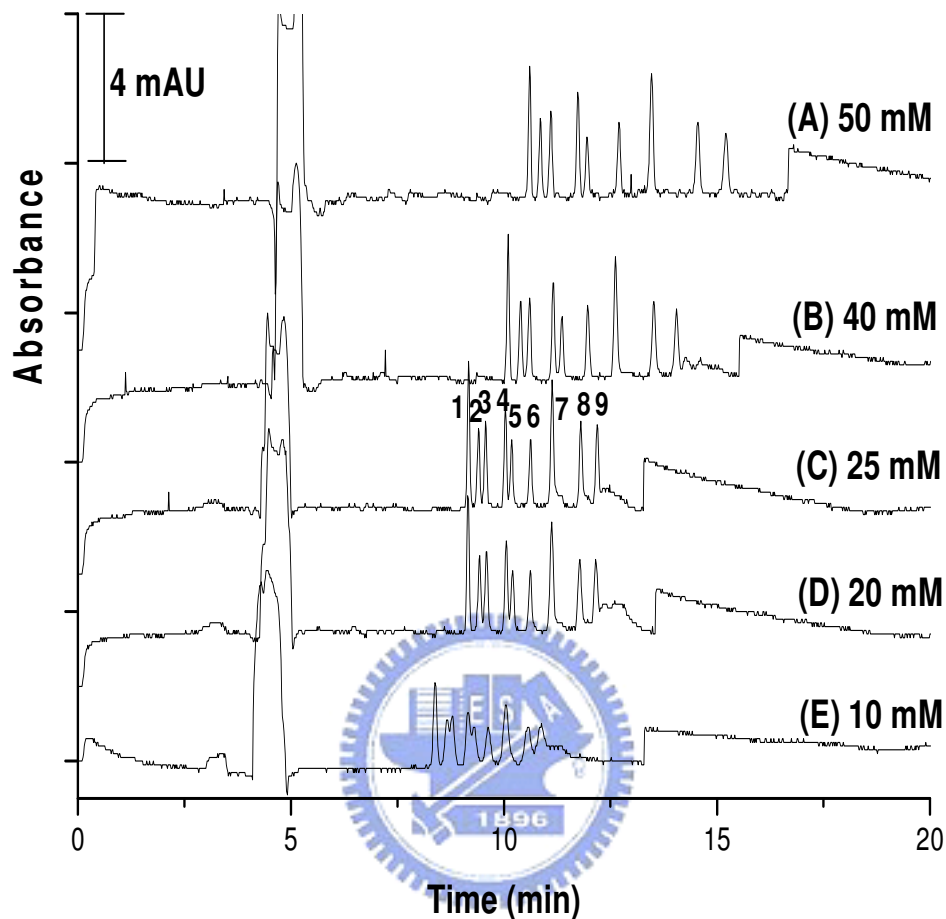


Fig.6-4 Effect of buffer concentration on separation and stacking for benzodiazepines. BGE : pH 9.6 Borate Buffer, 60 mM CTAB ,CH₃OH : 25 %(v/v); sample matrix, pH value and concentration the same as buffer condition. separative voltage : -25 KV ; injection time : 210 s ; effect length of capillary : 50 cm.; total length :37 cm; ID = 50μm ; On-line UV detection obtained at 230 nm. Analytes(500ppb) : 1.Bromazepam , 2.Estazolam ,3.Alprazolam , 4.Triazolam ,5.Flunitrazelam, 6.Chlordiazepoxide, 7.Diazepam, 8.Clorazepate, 9.Nitrazepam

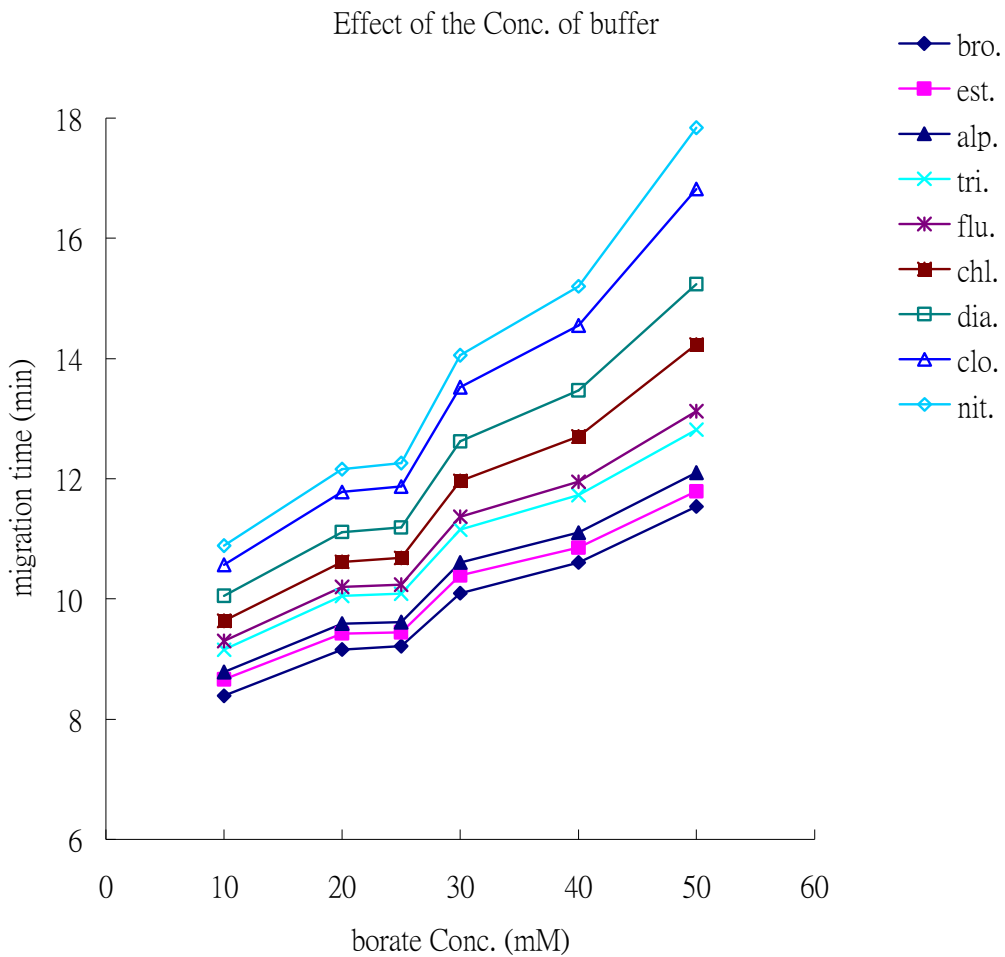


Fig.6-5 Variation of the migration time of benzodiazepines as a function of the buffer electrolyte concentration. Other conditions as described in Fig. 6-4.

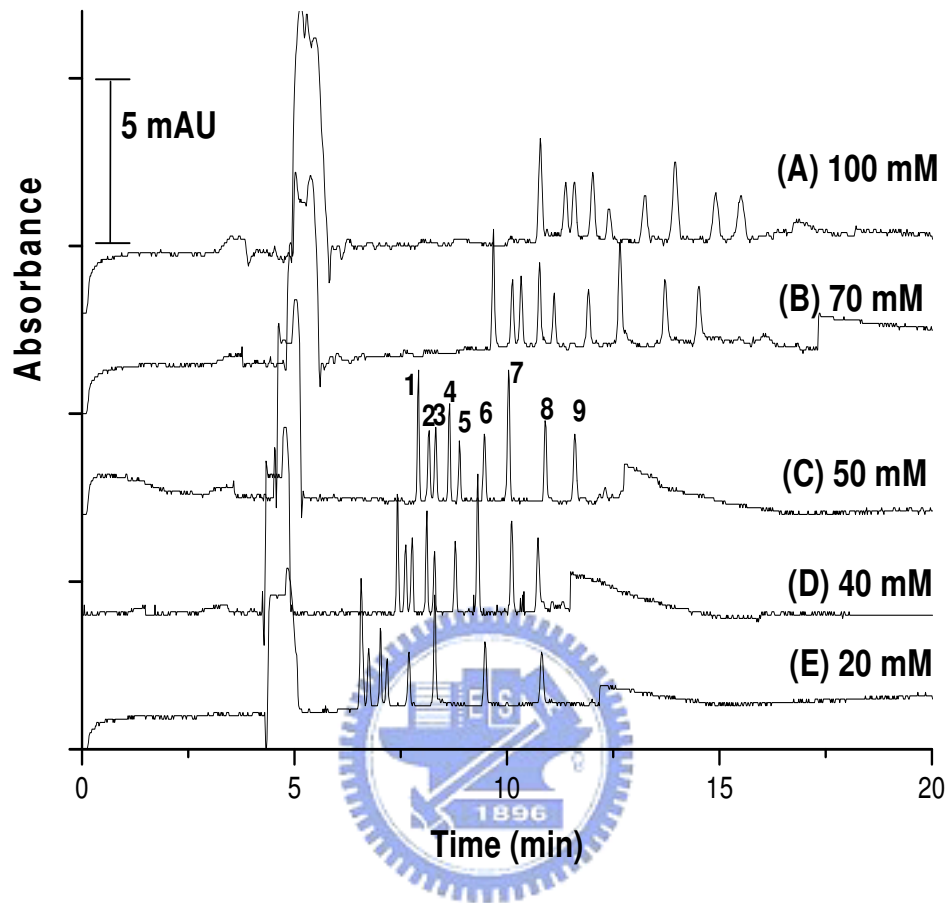


Fig.6-6 Effect of CTAB concentration on separation and stacking for benzodiazepines. BGE : pH 9.6, 25 mM Borate Buffer, CH₃OH : 30 % (v/v); sample matrix, pH value and concentration the same as buffer condition. separative voltage : -25 kV ; injection time : 210 s ; effect length of capillary : 50 cm.; total length : 37 cm; ID = 50 μm ; On-line UV detection obtained at 230 nm. Analytes (500 ppb) : 1. Bromazepam , 2. Estazolam , 3. Alprazolam , 4. Triazolam , 5. Flunitrazepam , 6. Chlordiazepoxide , 7. Diazepam , 8. Clorazepate , 9. Nitrazepam

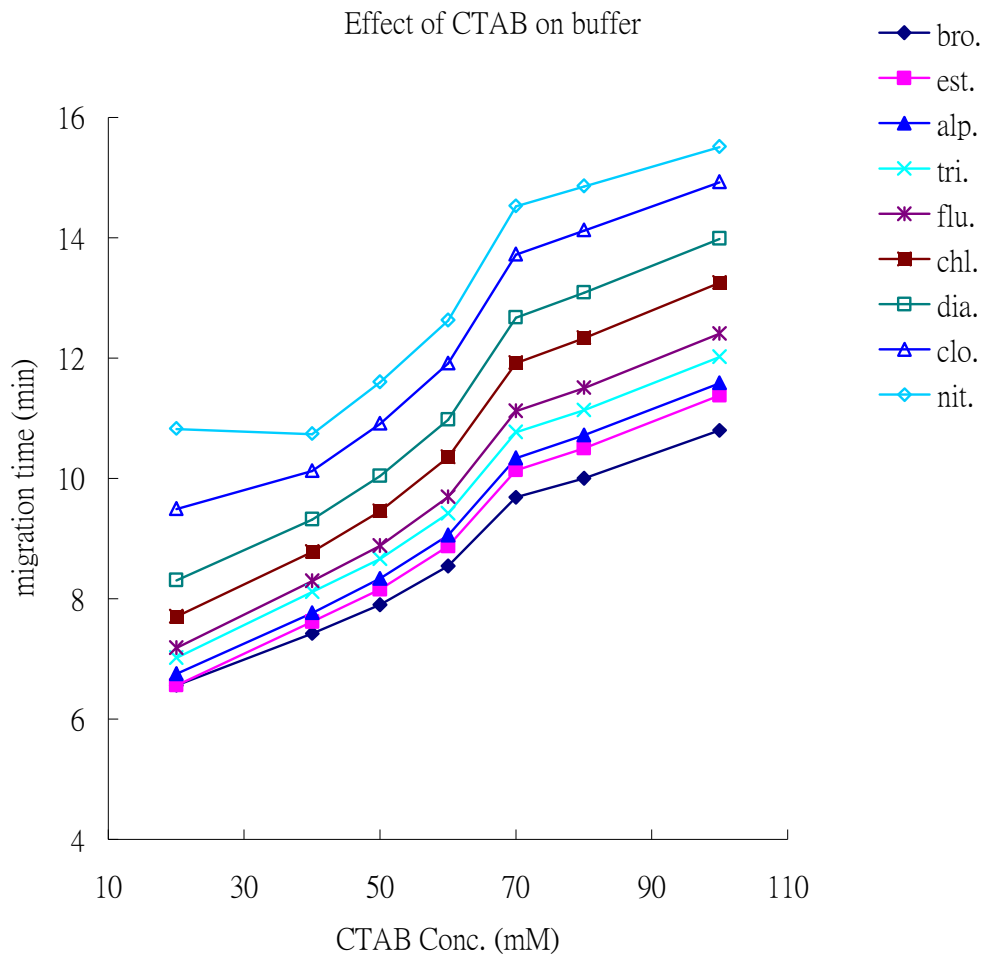


Fig.6-7 Variation of the migration time of benzodiazepines as a function of the buffer CTAB concentration. Other conditions as described in Fig. 6-6.

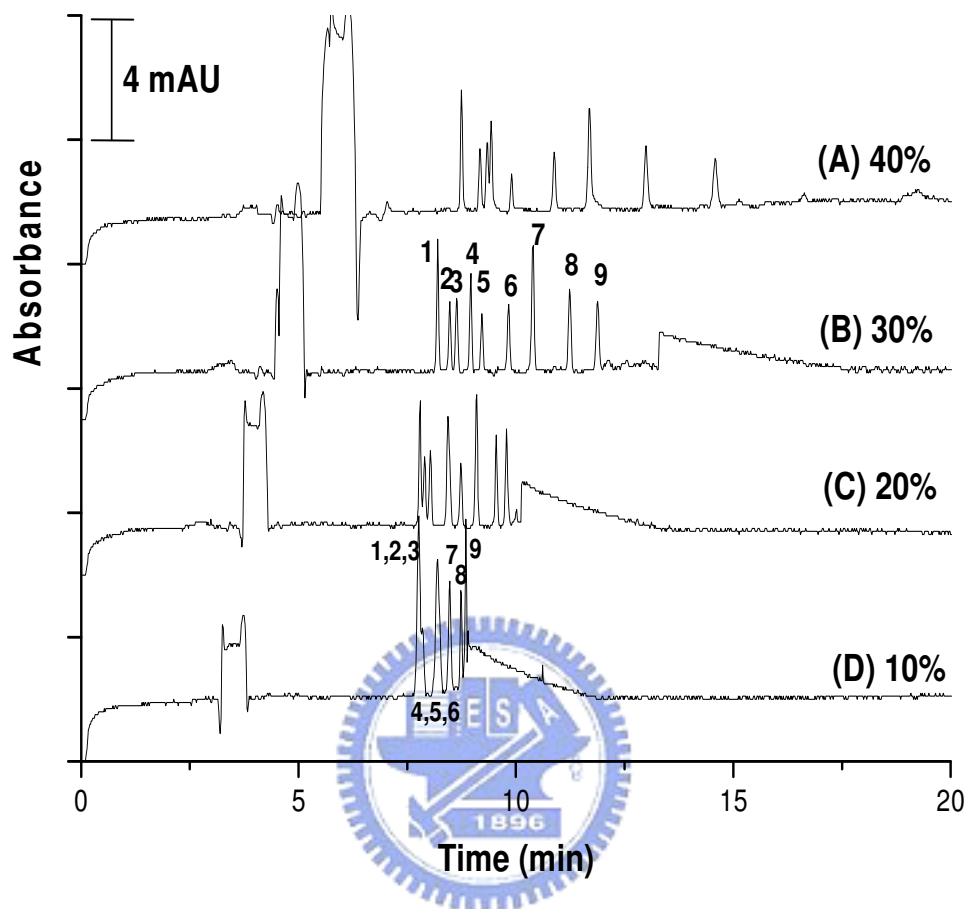


Fig.6-8 Effect of buffer solution methanol % (v/v) on separation and stacking for benzodiazepines. BGE : pH 9.6, 25 mM Borate Buffer, 60 mM CTAB; sample matrix, pH value and concentration the same as buffer condition. separative voltage : -25 kV ; injection time : 210 s ; effect length of capillary : 50 cm.; total length :37 cm; ID = 50 μ m ; On-line UV detection obtained at 230 nm. Analytes(500ppb) : 1.Bromazepam , 2.Estazolam ,3.Alprazolam , 4.Triazolam ,5.Flunitrazelam, 6.Chlordiazepoxide, 7.Diazepam, 8.Clorazepate, 9.Nitrazepam.

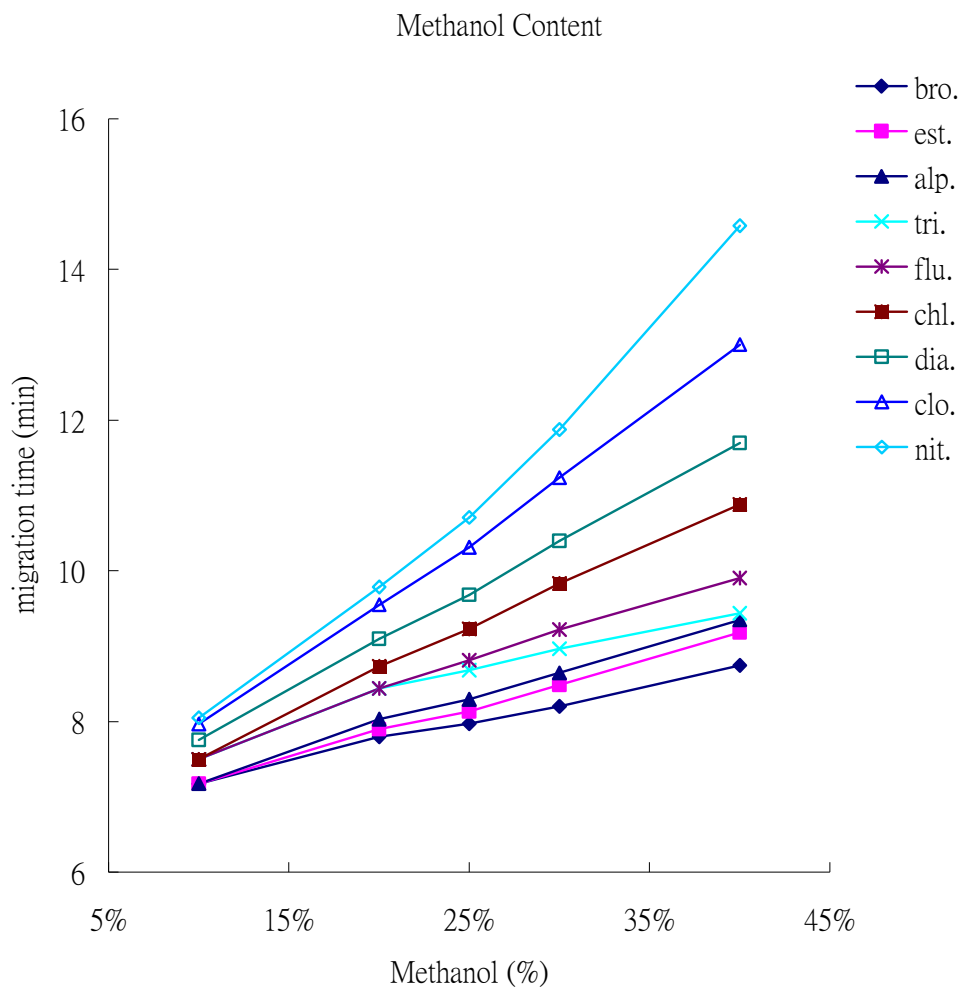


Fig.6-9 Variation of the migration time of benzodiazepines as a function of the methanol content of buffer . Other conditions as described in Fig. 6-8.

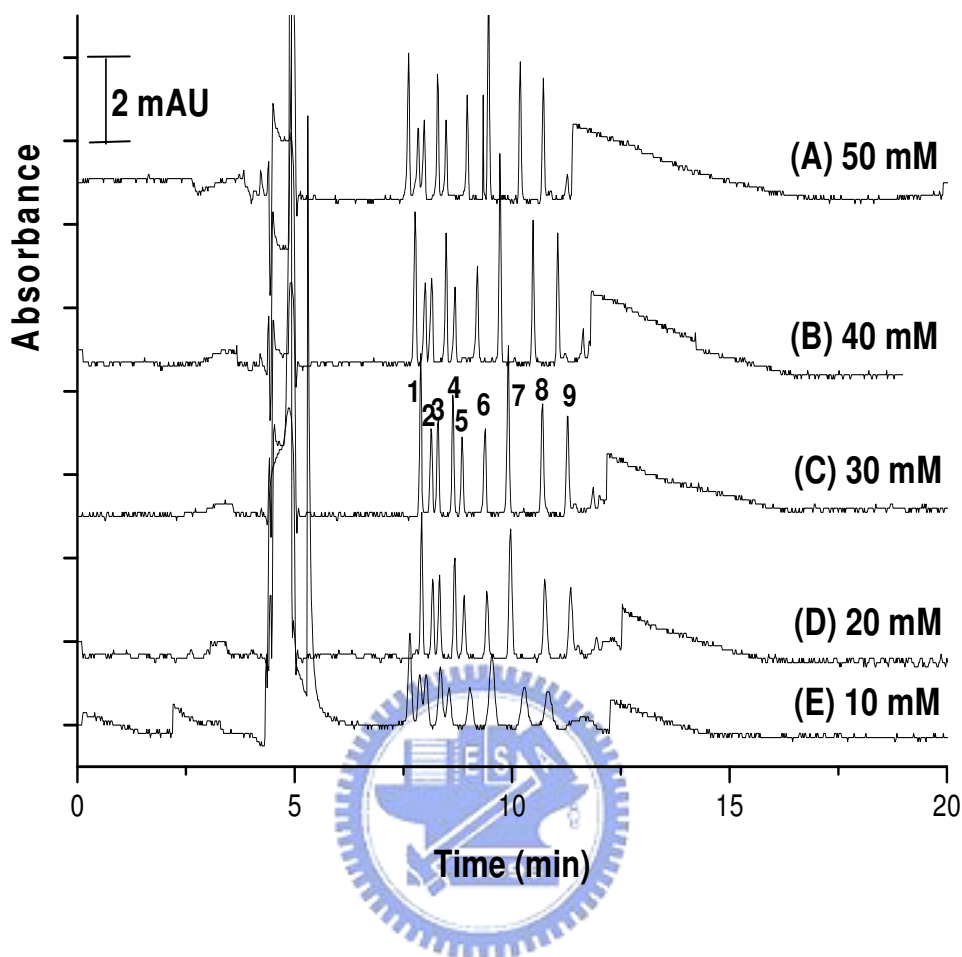
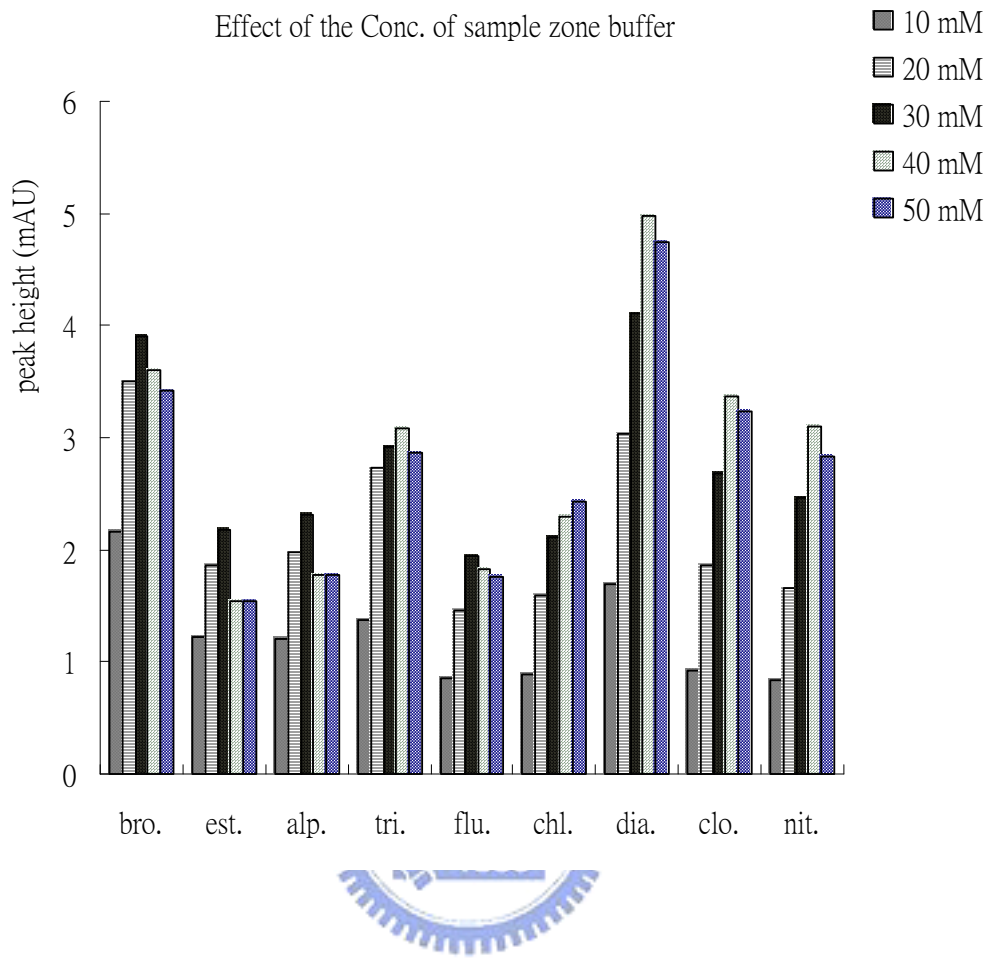


Fig.6-10 Effect of sample matrix concentration on separation and stacking for benzodiazepines. BGE : pH 9.6, 25mM Borate Buffer, 50 mM CTAB ,CH₃OH : 30 %(v/v); sample matrix: pH 9.6, separative voltage : -25 KV ; injection time : 210 s ; effect length of capillary : 50 cm.; total length :37 cm; ID = 50 μ m ; On-line UV detection obtained at 230 nm. Analytes(500ppb) : 1.Bromazepam , 2.Estazolam ,3.Alprazolam , 4.Triazolam ,5.Flunitrazelam, 6.Chlordiazepoxide, 7.Diazepam, 8.Clorazepate, 9.Nitrazepam

Effect of the Conc. of sample zone buffer



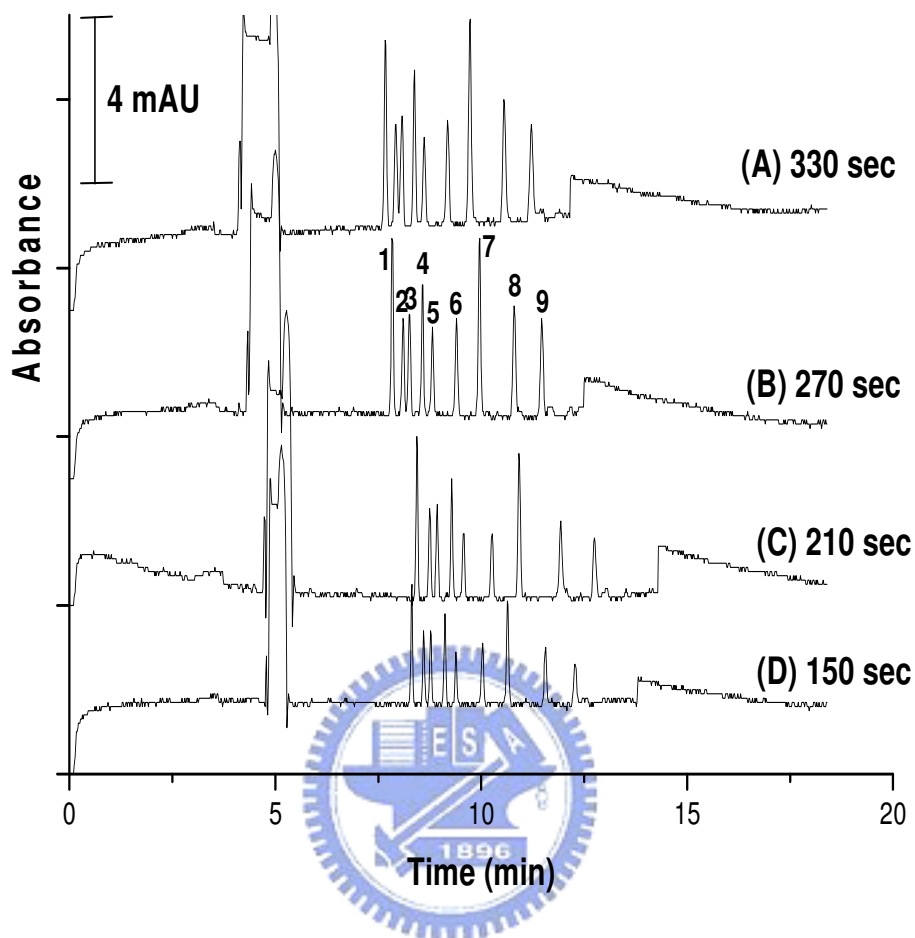


Fig.6-12 Effect of sample injection time on separation and stacking for benzodiazepines. BGE : pH 9.6, 25mM Borate Buffer, 50 mM CTAB ,CH₃OH : 30 %(v/v); sample matrix, pH 9.6, 30mM Borate. separative voltage : -25 KV ; effect length of capillary : 50 cm.; total length :37 cm; ID = 50 μ m ; On-line UV detection obtained at 230 nm. Analytes(500ppb) : 1.Bromazepam , 2.Estazolam ,3.Alprazolam , 4.Triazolam ,5.Flunitrazelam, 6.Chlordiazepoxide, 7.Diazepam, 8.Clorazepate, 9.Nitrazepam

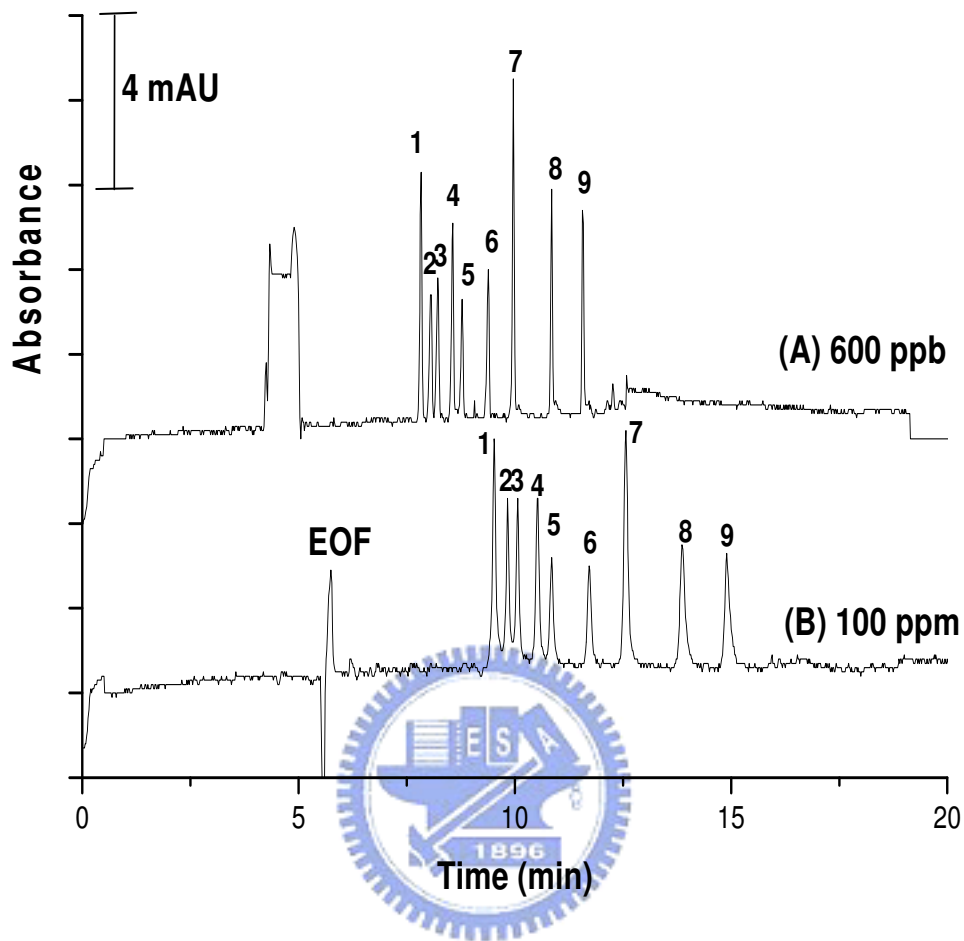


Fig.6-13 Comparison of sweeping-MEKC method with the normal hydrodynamic sample injection. (A) sweeping-MEKC procedure. Sample concentration: 600 ppb; sample injection :270 sec. (B) Normal hydrodynamic injection. Sample concentration: 100 ppm; hydrodynamic injection : 2.0 sec.

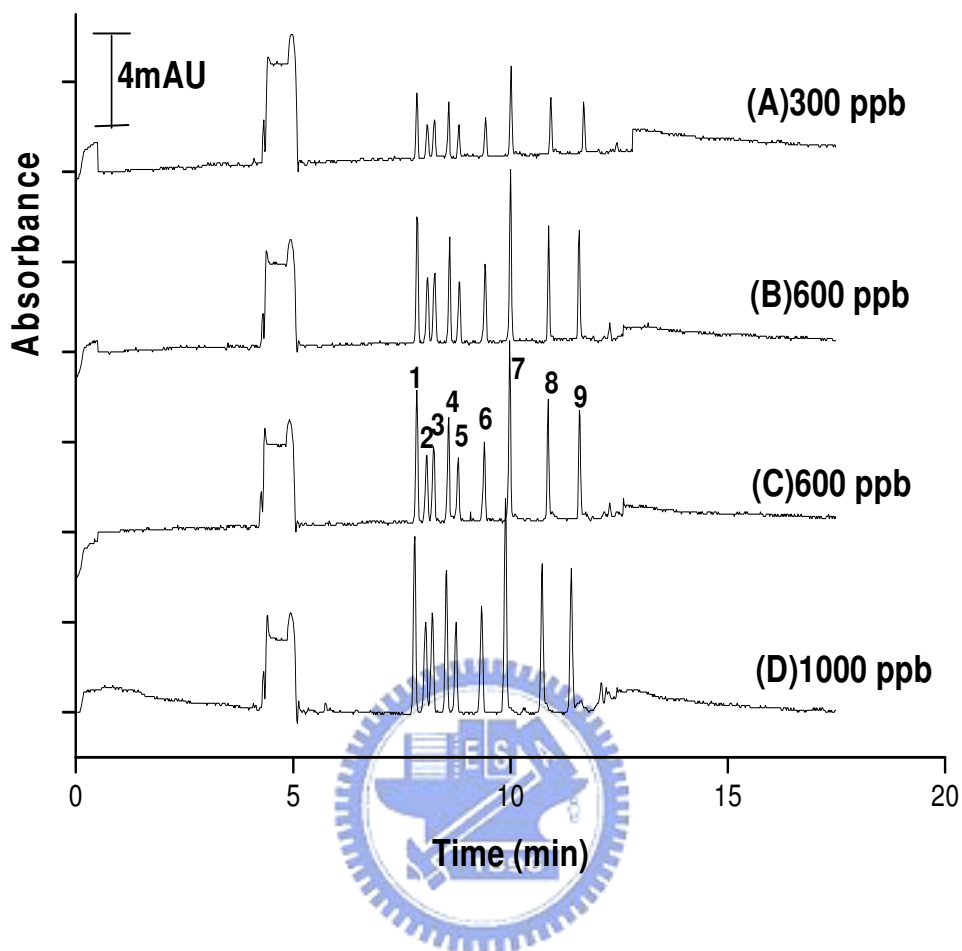


Fig.6-14 Electropherogram of a standard mixture of nine benzodiazepines .
 BGE : pH 9.6, 25mM Borate Buffer, 50 mM CTAB ,CH₃OH : 30 % (v/v); sample matrix, pH 9.6, 30mM Borate. separative voltage : -25 KV ; effect length of capillary : 50 cm.; total length :37 cm; ID = 50 μ m ; On-line UV detection obtained at 230 nm. Analytes : 1.Bromazepam , 2.Estazolam ,3.Alprazolam , 4.Triazolam ,5.Flunitrazelam, 6.Chlordiazepoxide, 7.Diazepam, 8.Clorazepate, 9.Nitrazepam