

5. Baseline Noise in Gradient Elution

In gradient analysis, incomplete mixing of mobile phases or impurities in water of mobile phase can cause baseline noise. In the former case, it can be improved by using a proper mixer before injector (Baseline 1→2). In the latter case, it can be improved by using a pre-column. Impurities in water are adsorbed on the pre-column (Baseline 2→3). COSMOSIL 5C₁₈-AR-II 4.6 mm I.D. x 10 mm or 10 mm I.D. x 20 mm as a pre-column.

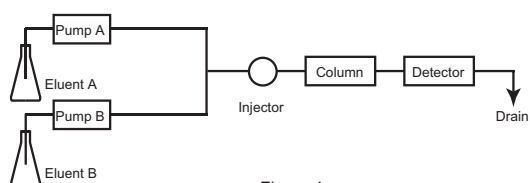
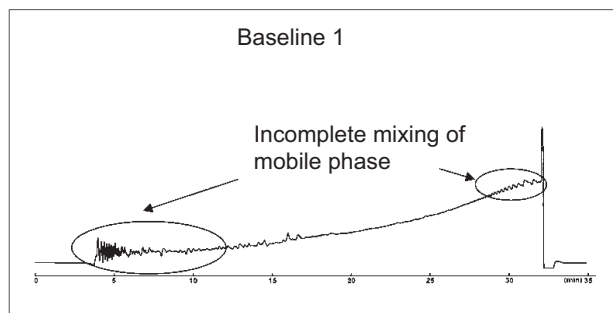


Figure 1



+ Mixer

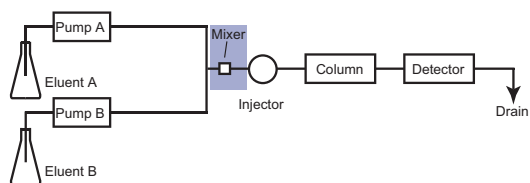
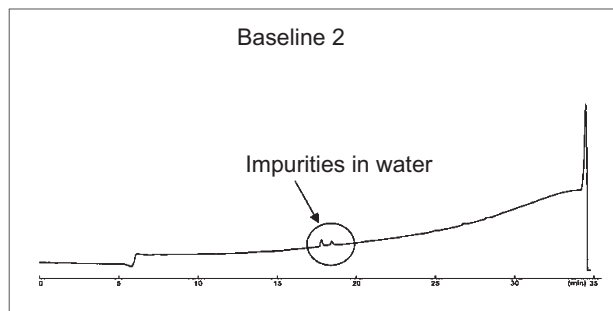


Figure 2



+ Pre-column

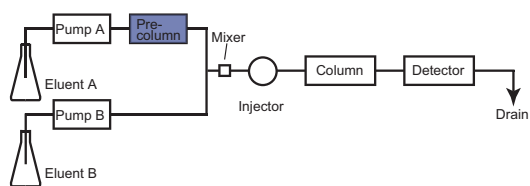
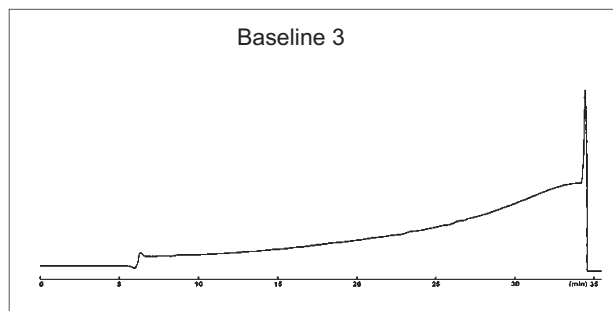


Figure 3



Column COSMOSIL 5C₁₈-AR-300 4.6 mm I.D. x 150 mm
 Precolumn COSMOSIL 5C₁₈-AR-II 4.6 mm I.D. x 10 mm
 Mobile phase A: 0.1% TFA containing water
 B: 0.1% TFA containing 95% acetonitrile
 B: 0% → 100%/30 min liner gradient
 Flow rate 1.0 ml/min
 Temperature 30°C
 Detection UV 220nm