

# TECHNICAL NOTE

## 4. 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 5C<sub>18</sub>-AR-II 4.6 mm I.D. x 10 mm or 10 mm I.D. x 20 mm as a pre-column.

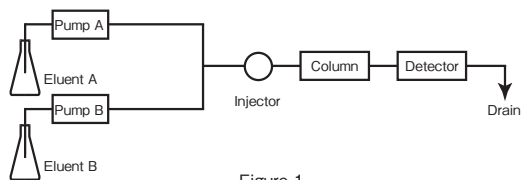
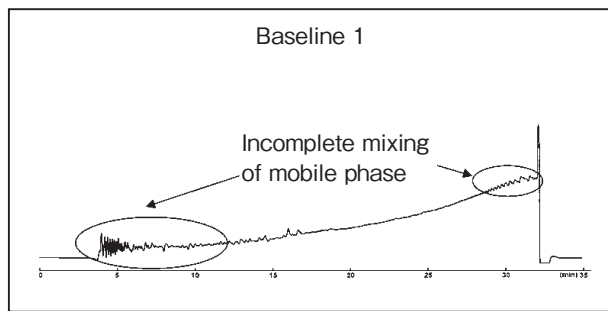


Figure 1



+ Mixer

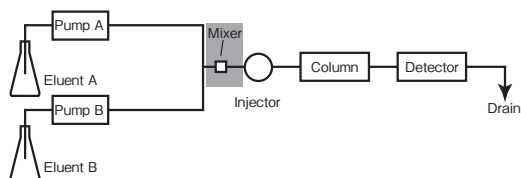
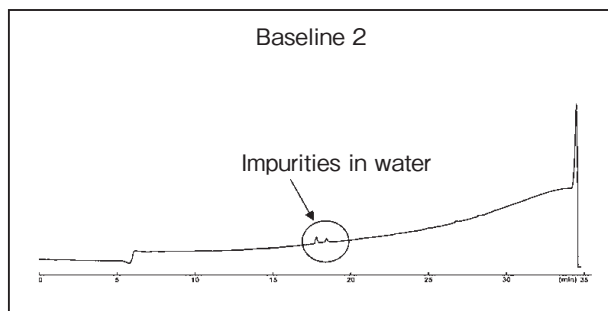


Figure 2



+ Pre-column

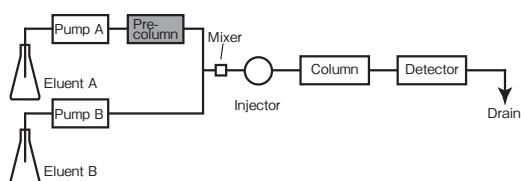
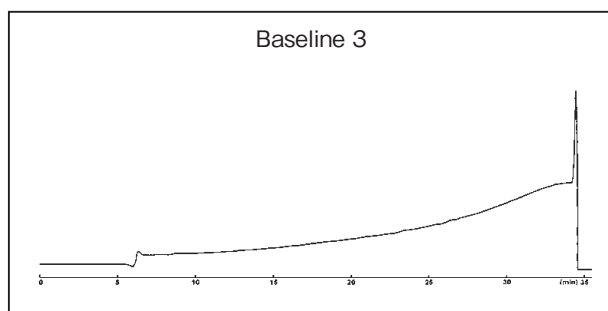


Figure 3



Column COSMOSIL 5C<sub>18</sub>-AR-300 4.6 mm I.D. × 150 mm  
 Precolumn COSMOSIL 5C<sub>18</sub>-AR-II 4.6 mm I.D. × 10 mm  
 Mobile phase A : 0.1% TFA containing water  
 B : 0.1% TFA containing 95% acetonitrile  
 B 0% → 100%/30 min linear gradient  
 Flow rate 1.0 ml/min  
 Temperature 30°C  
 Detection UV 220 nm