

## Separation Studies of Guanine and Cytosine by HPLC and Aspen Chromatography

박문배, 김인호\*  
충남대학교  
(ihkim@cnu.ac.kr\*)

DNA structure is interesting in biological, biochemical and medical discipline. Extensive theoretical investigations for DNA focus on the base pairs guanine and cytosine in nucleotide. The guanine and cytosine were analyzed by HPLC (High Performance Liquid Chromatography) and their chromatograms simulated by Aspen chromatography. C<sub>18</sub> HPLC column and water/methanol/acetic acid mixture (90/10/0.1) were used for separation of guanine and cytosine. Chromatographic parameters (selectivity, resolution and number of theoretical plate) were calculated under different flow rates and sample concentrations. Calculated numbers of theoretical plate, retention time and porosity were utilized for simulation by Aspen chromatography, and we compared the simulations with experimental data.