

Mobile Phase Composition for Purine Compounds by HCl Program

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The optimization of mobile phase condition for analysis of the eight purine derivatives (adenine, caffeine, guanine, hypoxanthine, purine, theobromine, theophylline, and uric acid) was demonstrated by HCl program. The binary mobile phase of water and methanol was used. The elution profiles were calculated by the plate theory based on one of the linear and quadratic equations of retention factor, $\ln k = \ln k_w + SF$, $\ln k = L + MF + NF^2$, $k=A+B/F$, where k was the retention factor and F was the vol.% of methanol. From the final calculated results, the quadratic polynomial-binary equation of retention factor showed the best agreements between the calculated and experimental data. And on the isocratic mode with mobile phase composition of water/ methanol, 86/14(vol.%), most compounds were resolved. However, to separate completely all the components, the gradient mode will be considered