

# Allowable HPLC Adjustments for United States Pharmacopeia (USP) Methods

Shodex™



HPLC Columns

SHOWA  
DENKO  
EUROPE

USP Chapter 621

1. Column length:  $\pm 70\%$
2. Column inner diameter: *Can be adjusted if the linear velocity is kept constant*
3. Particle size:  $- 50\%$
4. Flow rate:  $\pm 50\%$
5. Ratio of components in mobile phase:  $\pm 30\%$  (relative for less one) or  $\pm 10\%$  absolute
6. Mobile phase pH:  $\pm 0.2$
7. Concentration of salts in buffer:  $\pm 10\%$
8. Column temperature:  $\pm 10^\circ\text{C}$
9. Wavelength of UV-visible detector:  $\pm 3\text{ nm}$
10. Injection volume: *Can be reduced as long as precision and detection limits are achieved*