

USP <621> Chromatography

HPLC

- Column length : $\pm 70\%$
Ex: 15CM= \Rightarrow (4.5~25.5CM), 25CM= \Rightarrow (7.5~42.5CM)
- Column ID : linear velocity is kept constant.
- Particle size : can be reduced by as much as 50%, but cannot be increased.
- Flow rate : $F_2 = F_1 (I_2 D_2^2 / I_1 D_1^2)$
EX: 4.0X150mm 5 μ m, flow rate 1ml/min
 \rightarrow 4.6X150mm 5 μ m, flow rate **1.3ml/min**
- Injection Volume : can be reduced as far as is consistent with accepted precision and detection limits; no increase is permitted.
- Column temperature : $\pm 10^\circ\text{C}$



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GC

- Column length : $\pm 70\%$
Ex: 30M=>(9~51M), 60M=>(18~102CM)
- Column ID : $\pm 50\%$.
- Film thickness : -50% to 100%
- Particle size :
- Flow rate : $\pm 50\%$.
- Injection Volume :
- Oven temperature : $\pm 10^\circ\text{C}$

