Contents

P_{l}	Preface			
Fo	Toreword			
4l	1bbreviations			
1	The	history and development of preparative		
	HPI		1	
2	Flui	d dynamics, mass transport and friction	17	
3	Mod	des of chromatographic separation	29	
		Particle size	32	
		Pore structure, size and surface area	33	
	3.1	Normal phase chromatography	35	
	3.2	Reversed phase chromatography	37	
	3.3	Chiral separations	41	
		Chirality	42	
		Optical purity	43	
		Separation of enantiomers	44	
	3.4	Ion exchange chromatography	47	
	3.5	Exclusion chromatography	53	
	3.6	Affinity chromatography	54	

vi Contents

4	How to get started		57
	4.1	Packing a column	59
		Column packing protocol for column type 1	63
		Slurry concentration	63
		Slurry and column preparation	64
		Column packing protocol for column type 2	65
	4.2	What and where!	66
	4.3	Product recovery	69
	4.4	Productivity	72
5	Process development and optimization		77
	5.1	Sample self displacement for purification	
		of a peptide	79
		Analytical HPLC	90
		Gradient selection	91
		Loading study	92
		Flow rate optimization	93
	5.2	Boxcar injections for chiral separations	95
6	Documentation and record keeping		101
	6.1	Equipment qualification	103
	6.2	Process documentation	105
Αp	Appendices		
References			
Index			