

Table 15 TLC Enantiomeric Separation of α -Hydroxycarboxylic Acids

Racemate	R_f value			
	HPTLC-CHIR ^a		Chiralplate ^b	
Mandelic acid	0.36	0.48	0.41	0.48 (L)
3-Hydroxymandelic acid	0.24	0.31	0.28	0.34
4-Hydroxymandelic acid	0.22	0.29	0.25	0.31
3,4-Dihydroxymandelic acid			0.16	0.19
4-Hydroxy-3-methoxymandelic acid	0.24	0.33	0.37	0.41
2-Hydroxy-3-methylpentanoic acid	0.34	0.49	0.46	0.54 (L)
2-Hydroxy-4-methylpentanoic acid (sodium salt)	0.35	0.47	0.45	0.51 (L)
2-Hydroxy-4-methylthiobutanoic acid (sodium salt)	0.33	0.45	0.43	0.50 (L)
2-Hydroxy-3-phenylpropionic acid	0.39	0.51	0.46	0.53 (L)
2-Hydroxy-3-methylbutanoic acid	0.33	0.46	0.42	0.50 (L)
2-Hydroxybutanoic acid (sodium salt)	0.27	0.37	0.35	0.43
2-Hydroxyoctanoic acid	0.36	0.50	0.45	0.51
2-Hydroxytetradecanoic acid	0.34	0.49	0.49	0.55
2-Hydroxy-2-phenylpropionic acid	0.38	0.47	0.50	0.54
Lactic acid	0.19	0.24	0.30	0.34 (L)
2-Hydroxyhexadecanoic acid	0.39	0.56	0.51	0.55
2-Hydroxypentanoic acid	0.25	0.39	0.39	0.47
2-Hydroxydocosanoic acid	0.39	0.56	0.48	0.57

^aMigration distance 6.0 cm (measured from concentrating zone); eluent, dichloromethane–methanol, 45:5.

^bMigration distance 13 cm; eluent, dichloromethane–methanol, 45:5.

dipeptides (253). Wang et al. (98) compared the migration and separation characteristics of dipeptides on Chiralplate with those on cellulose. Marseigne (237) separated D,L-Asp-acc-OPr (dipeptide 56410 RP), a dipeptide with sweetening properties, whereas another group (236) investigated the separation of D,L-Asp-D,L-Phe-OCH₃ (aspartame).

α -Methylamino acids. α -Methylamino acids are very important as specific enzyme inhibitors. Furthermore, they can be directly inserted into numerous biologically active peptides to modify their range of activity. Separations in this field with different eluent systems have been

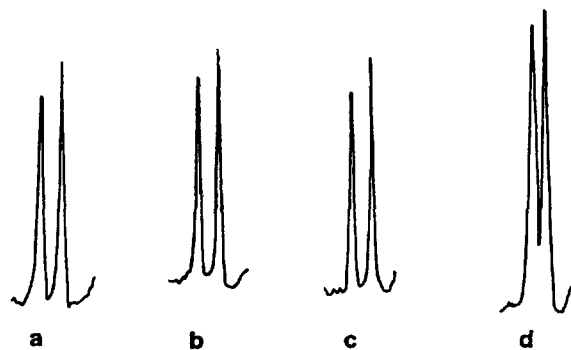


Figure 16 Remission-location curves: (a) D,L-2-Hydroxytetradecanoic acid; (b) D,L-2-hydroxyhexadecanoic acid; (c) D,L-2-hydroxydocosanoic acid; (d) D,L-lactic acid.