

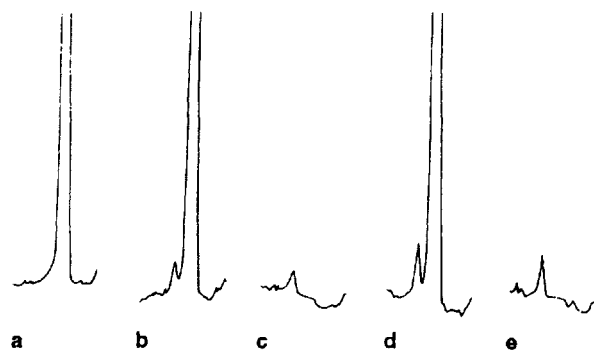
**Figure 17** Remission-location curves: (a) D,L-2-Hydroxy-2-phenylpropionic acid; (b) D,L-2-hydroxy-3-phenylpropionic acid; (c) D,L-2-hydroxybutanoic acid; (d) D,L-2-hydroxyoctanoic acid.

published independently (Fig. 12) (223,224,256). As can be seen from Table 11, D,L-methyldopa can also be separated without problems (255).

*N*-Alkylamino acids. Table 12 and Fig. 13 show the separation of enantiomeric *N*-alkylamino acids and *N*-formyl-*tert*-leucine. Further examples have been published recently (116,219,251). In contrast to the examples described above, the detection of *N,N*-dimethylphenylalanine was achieved with iodine. The enantiomeric separation of *N*-carbamoyltryptophan has also been described (225).

Halogenated amino acids. Another class of compounds that shows good enantiomeric resolution is the halogenated amino acids (Table 13 and Fig. 14). However, differentiation between 4-chloro-, 4-bromo-, and 4-iodophenylalanines is not possible (219,251).

Heterocyclic compounds. Thiazolidine-4-carboxylic acid and 5,6-dimethylthiazolidine-4-carboxylic acid are formed by formaldehyde condensation from cysteine and penicillamine, respectively. The derivatization of penicillamine has been published (251). Table 14 and Fig. 15 presents a summary of these results. The chromatographic characteristics of the thiazolidine carboxylic acids formed by the reaction of D,L-penicillamine with various substituted benzaldehydes and heterocyclic aldehydes have also been studied (226). 3-Carboxymorpholine was separated by Günther and Merget (116).



**Figure 18** Remission-location curves: (a) D,L-2-Hydroxy-3-phenylpropionic acid; (b) L-2-hydroxy-3-phenylpropionic acid spiked with 1% D-enantiomer; (c) 1% D-2-hydroxy-3-phenylpropionic acid; (d) L-2-hydroxy-3-phenylpropionic acid spiked with 2% D-enantiomer; (e) 2% D-2-hydroxy-3-phenylpropionic acid.