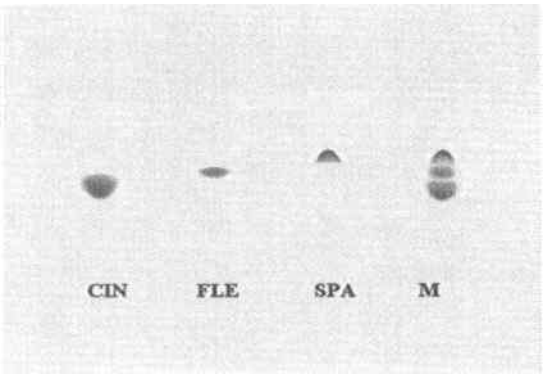

Figure 3 Separation of sparfloxacin (SPA), fleroxacin (FLE), cinoxacin (CIN), and their mixture on silica gel plate with dichloromethane–2-propanol–25% ammonia (4:5:2). (From Ref. 87.)

mobile phase was chloroform–methanol–toluene–dichloromethane–aq. ammonia (2.7:4.6:1.7:0.5:0.5). The recovery of the three antibiotics in body fluids ranged from 96% to 108%.

Ofloxacin and enoxacin were determined on silica gel plates impregnated with various concentrations of Na_2EDTA solution at various pH values (90). The mobile phase was chloroform–methanol–ethyl acetate–tetrahydrofuran–aq. ammonia (6:4.6:1.5:0.8:1.5). The mean recovery of the two antibiotics in body fluid ranged from 95.4% to 105.2%.

G. Peptides

Peptide antibiotics consist of peptide chains covalently linked to other chemical entities. Most peptides are toxic and are poorly absorbed from the alimentary tract. Peptides are difficult to analyze in biological matrices because they are very similar to the matrix components. They can be separated on silica gel, amino silica gel, and silanized silica gel plates. A variety of mobile phases are used, from simple ones such as chloroform–methanol up to multicomponent ones such as *n*-butanol–butyl acetate–methanol–acetic acid–water. The detection methods used are densitometry and fluorescence densitometry and/or spraying of the plate with reagents such as ninhydrin or fluorescamine. Bioautographic detection can also be used with *Bacillus subtilis* and *Mycobacterium smegmatis*.

The antitumor antibiotic bleomycin is a mixture of closely related glycopeptides that differ only in their terminal amines. The main components of bleomycin are bleomycin A_1, A_2, A_5, and B_2; demethylbleomycin A_2; and bleomycin acid. For separation of bleomycins, three TLC systems

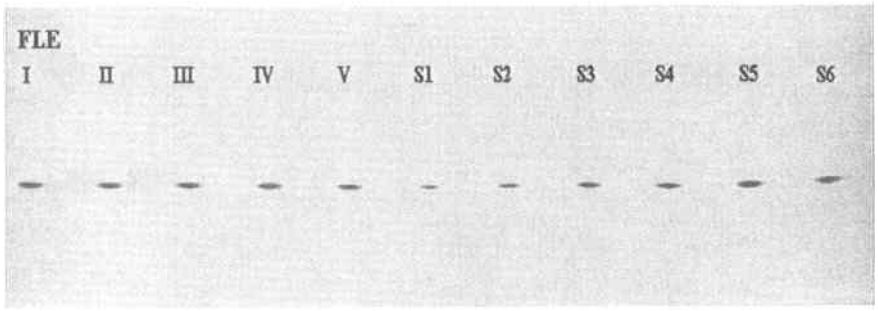

Figure 4 Results of HPTLC of fleroxacin on silica gel plate with dichloromethane–2-propanol–25% ammonia (4:5:2). S1–S6, standard solutions (0.4–2.4 μg); I–IV, sample solutions (1.4 μg). (From Ref. 87.)