

## SIMULTANEOUS HPTLC DETERMINATION OF SOME ANTIMYCOTICS IMIDAZOLE DERIVATIVES AND PRESERVATIVES IN CREAMS AND GEL

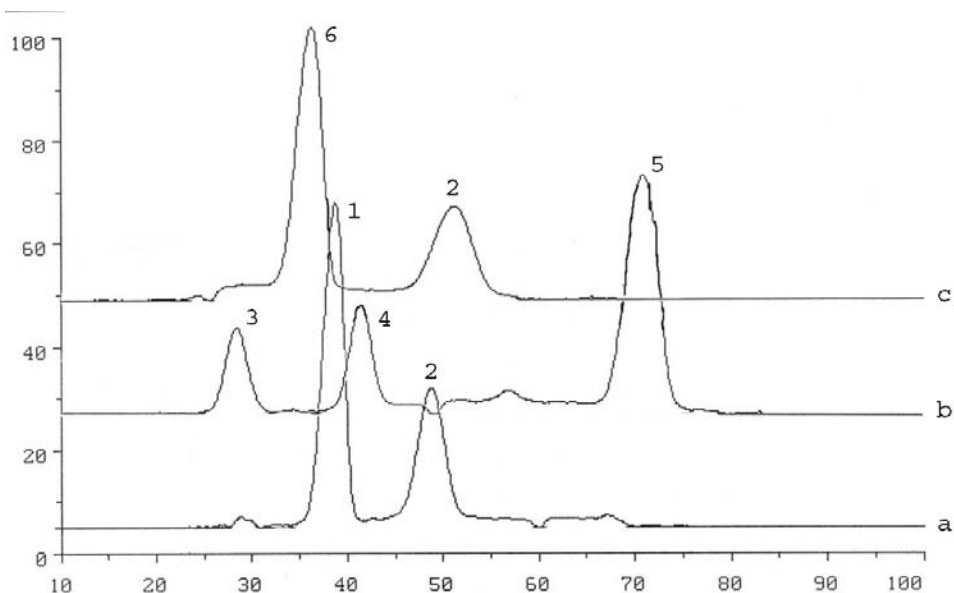
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During recent years, the application of antimycotics imidazole derivatives is increasing due to their efficiency in the treatment of mycoses, especially in patients with a decreased immunity. They are applied in the form of creme, gel, solution or tablets. Some of antimycotics formulations, such as a creme or gel, contain preservatives.

The aim of this work was to choose a chromatographic conditions for simultaneous determination of antimycotics (bifonazole, miconazole, clotrimazole) and preservatives (benzoic acid and benzyl alcohol). No literature data concerning this topic is available so far. The following mobile phases were used: ethyl acetate - n-heptane - methanol - diethylamine (3:4.5:1:0.2, v/v/v/v) for bifonazole and benzyl alcohol; n-butyl acetate - carbontetrachloride - methanol - diethylamine (3:6:2.5:0.5, v/v/v/v) for miconazole and benzoic acid; butyl acetate - n-heptane - methanol - diethylamine (3:4.5:1:0.2, v/v/v/v) for clotrimazole and benzyl alcohol. An assay of the named compounds were performed on silica gel 60F<sub>254</sub> HPTLC plates (20 x 10 cm). A TLC scanner set at 230 nm was used for direct evaluation of chromatograms in reflectance/absorbance mode. Quantitation was done by using peak area. Validation parameters, such as correlation coefficient ( $r > 0.99$ ), repeatability (RSD 0.72 - 2.97 %) and accuracy (RSD 1.39 - 3.08 %) were obtained and found to be satisfactory.

The proposed methods are simple, reproducible and accurate and can be used for routine analysis of pharmaceutical preparations.



**Figure.** Chromatograms of mixture: **a**) bifonazole (1), benzyl alcohol (2); **b**) nitrate (3), benzoic acid (4); miconazole (5); **c**) clotrimazole (6); benzyl alcohol (2).