

High-performance liquid chromatography and identification of mycobacteria

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Identification of mycobacteria by means of high-performance liquid chromatography (HPLC) of cell-wall mycolic acids was introduced at the end of the last decade but, despite its high reliability, it has not yet reached widespread use in clinical microbiology laboratories. The various combinations of long-chain mycolic acids, which are present in the cell wall of mycobacteria, have been shown by different analytical methods to be species-specific. When suitably processed mycolic acids are subjected to HPLC analysis a chromatogram is produced. Simple comparison of the profile with ones of known mycobacterial species allows identification to species level, without the need to recognize the individual compounds. Representative HPLC profiles of the more common mycobacterial species, which are presently scattered in various articles, are presented here with the aim of encouraging greater use of this identification technique, which combines rapidity and ease of performance with reliability, and high specificity with low cost.