Identification of Some Mycolic Acid Containing Actinomycetes Using Fluorogenic Probes Based on 7-Amino-4-methylcoumarin and 4-Methylumbelliferone

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The 129 strains and the 15 control duplicated cultures were examined for 96 unit 121 characters (Table 2) using methods known to yield data of value for the classification 122 and identification of mycolic acid-containing actinomycetes (Goodfellow and 123 Alderson 1977; Goodfellow et al. 1998; Goodfellow et al.  The plates containing the fluorogenic substrates were read for 138 fluorescence at excitation 365 nm, emission 440 nm and sensitivity 28; the 139 chromogenic substrates were examined for absorbance at the wavelength of 405 nm. 140 The resultant readings were recorded as time zero and after two days incubation at 141 30°C, the microtitre plates were read again at the same settings. Cleavage of 7-amino-4-methylcoumarin substrates (7AMC): Exopeptidases The three taxa were also distinguished from one another and from validly described species of Streptomyces using rapid enzyme tests based on the fluorophores 7-amino-methylcoumarin and 4- methylumbelliferone, and computer-assisted identification procedures. The results indicate that selective isolation and rapid characterisation of streptomycetes using pyrolysis mass spectrometry provide a practical way of determining the phenotypic species diversity of streptomycetes in natural habitats. Reagent used to prepare fluorescent 7-amino-4-methylcoumarin (AMC) based substrates for the detection of proteolytic enzymes (excitation maximum: ~365-380 nm; emission maximum: ~430-460 nm). Also useful as a reference standard in enzyme assays. Packaging. Packaged under inert gas. Storage and Shipping Instructions. Following reconstitution, aliquot and freeze (-20°C). DMF and DMSO stock solutions are stable for up to 6 months at -20°C. Acetone stock solutions are stable for up to 1 week at 4°C or -20°C. Safety & Documentation. Safety Information.