

LIPIDS FROM *CLONOSTACHYS ROSEA* CONTAINING UNUSUAL FATTY ACIDS

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Clonostachys rosea is a mycoparasite of several plant pathogenic fungi. Colonies are generally whitish, orange, or salmon, however, the identities of the pigments are unknown. We studied the composition of the orange pigment when *C. rosea* was cultured in potato dextrose at 20°C, with a 12-h photoperiod. Biomass was filtered, extracted with CHCl₃:MeOH (2:1, v/v) and partitioned between water and organic (CHCl₃/MeOH) phases. The organic phase was analyzed by preparative-TLC, developed with ethanol:water:ammonium hydroxide (80:20:1). Four bands were collected and dissolved in chloroform. The slowest band, which was orange in color, was analyzed by ¹³C-NMR. It showed signals at δ 39.9-22.6, characteristic of CH₂ groups, signals at δ 172.9 and 173.4, characteristic of ester linkages of a glyceride, and signals at δ 19.1 and 14.1, characteristic of CH₃ groups. CH-O-R and CH₂-O-R substitutions at δ 68.9 and 62.1 were present in a ratio of 1:2, suggesting a glycerol moiety. Signals at δ 127.9-132.8 indicated the presence of unsaturated fatty acids. All the assignments were confirmed by a ¹³C-DEPT experiment, which suggests that this compound is a triglyceride. It was methanolized and the methyl esters were analyzed by GC-MS, giving an unsaturated/saturated ratio of 7:3. An unexpectedly high amount of *trans*-9-octadecenoic (elaidic) acid was detected (44.16%), as well as heptadecanoic acid and other common fatty acids (palmitic, oleic and linolenic acids ~33%).

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