

STRAIGHTFORWARD SYNTHESIS OF 2,2,4,4,5,7,7-d₇-CHOLESTANE: A NEW DEUTERATED STANDARD IN PETROLEUM ANALYSIS

Maicon Guerra de Miranda*, Andre Luis Mazzei Albert, Jari Nobrega Cardoso, Rosangela Sabbatini Capella Lopes and Claudio Cerqueira Lopes

Instituto de Química, Universidade Federal do Rio de Janeiro, Avenida Athos da Silveira Ramos, 149 CT, Bloco A, S.508, 21941-909 Cidade Universitária, Rio de Janeiro – RJ, Brasil

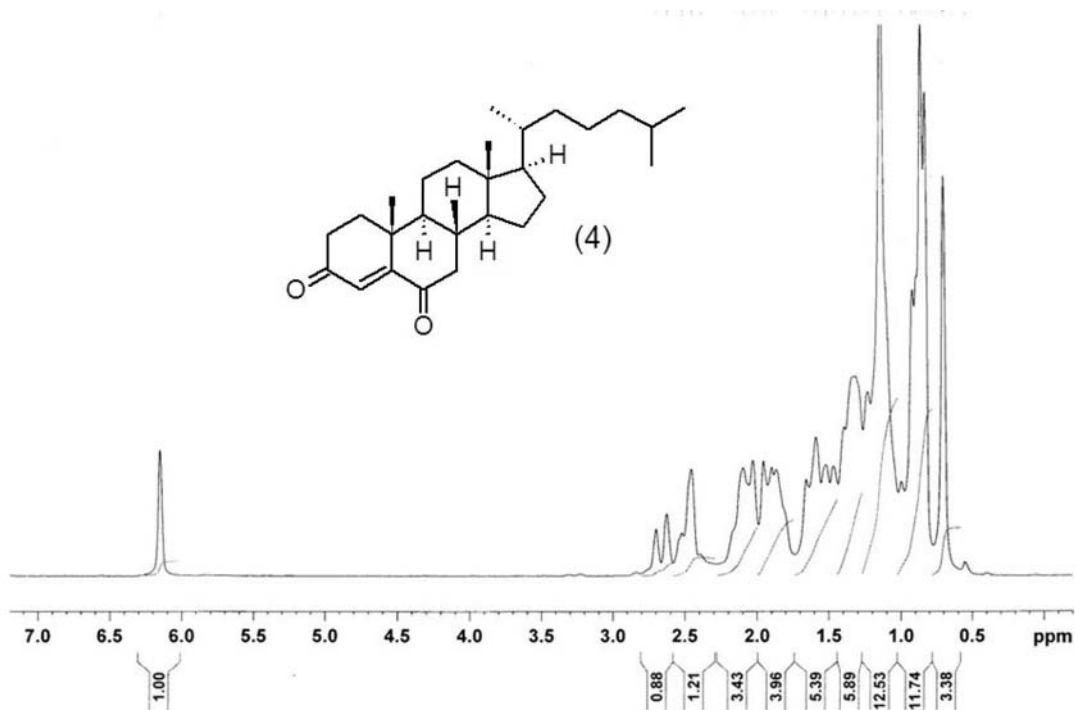


Figura 1S. ¹H NMR spectrum of 4-cholesten-3,6-dione (4), 200 MHz, CDCl₃

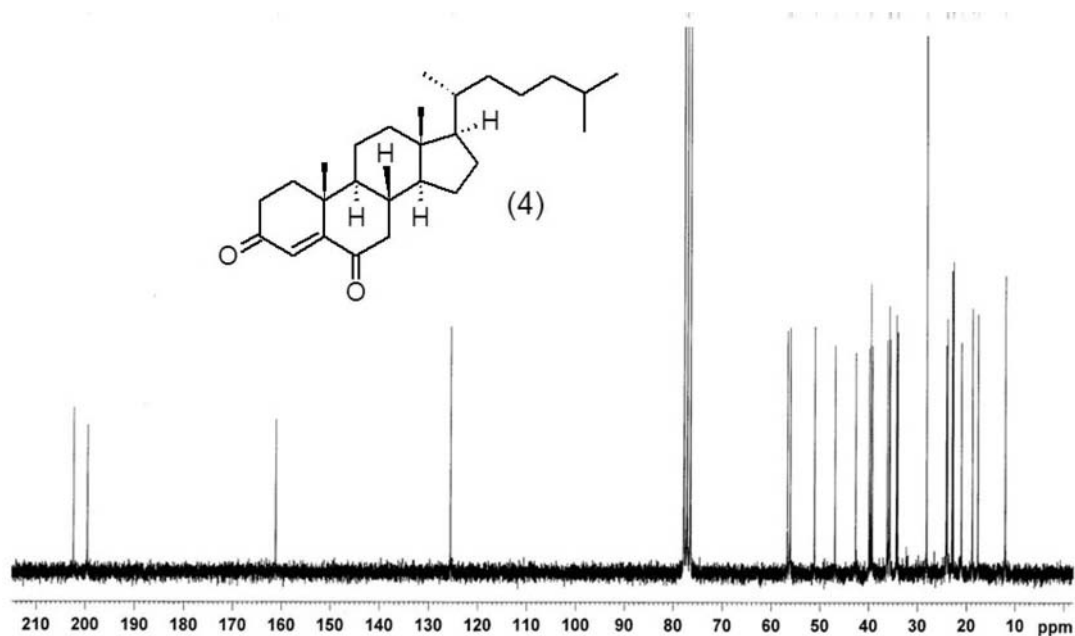


Figura 2S. ¹³C NMR spectrum of 4-cholesten-3,6-dione (4), 50 MHz, CDCl₃

*e-mail: maicon_iq@yahoo.com

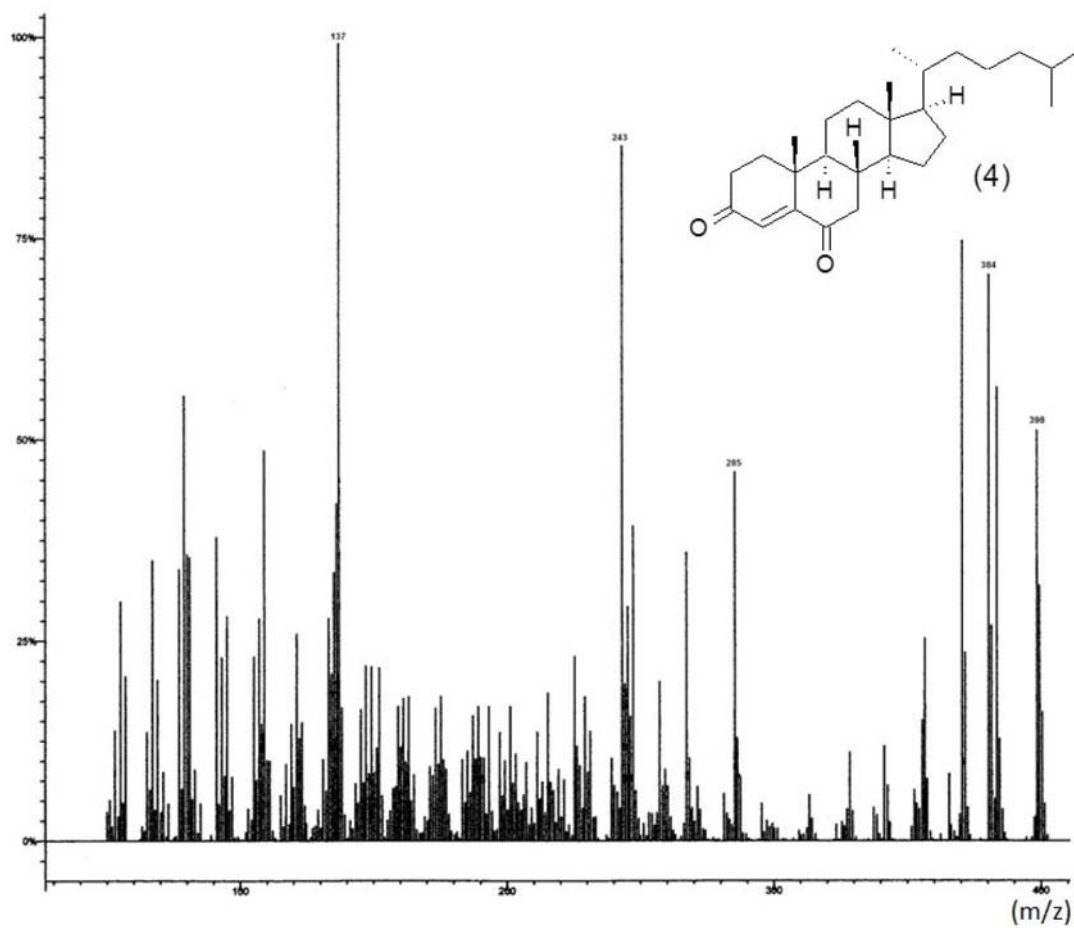


Figura 3S. EI-MS spectrum of 4-cholesten-3,6-dione (4)

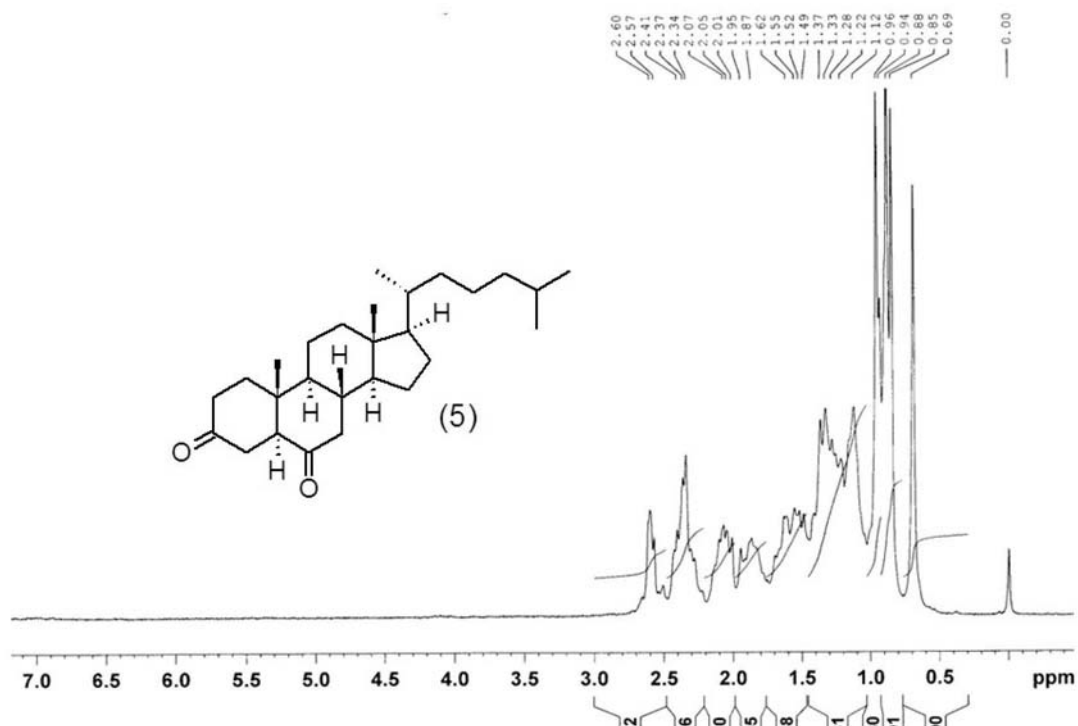


Figura 4S. ¹H NMR spectrum of 3,6-cholestandione (5), 200 MHz, CDCl₃

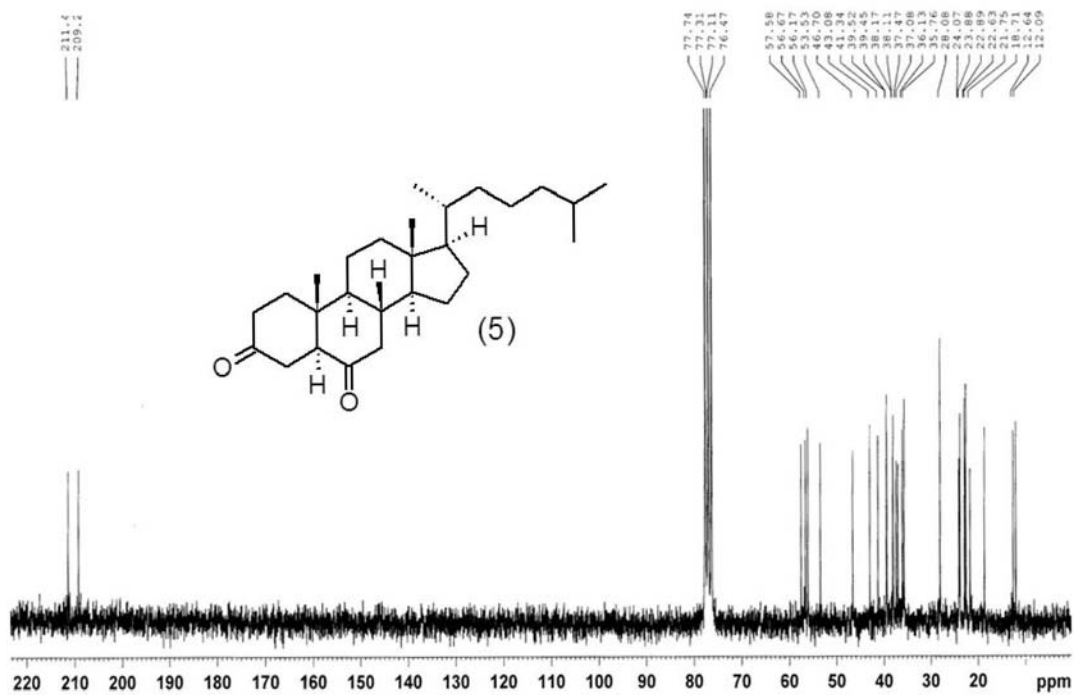


Figura 5S. ¹³CNMR spectrum of 3,6-cholestandione (5), 50 MHz, CDCl₃

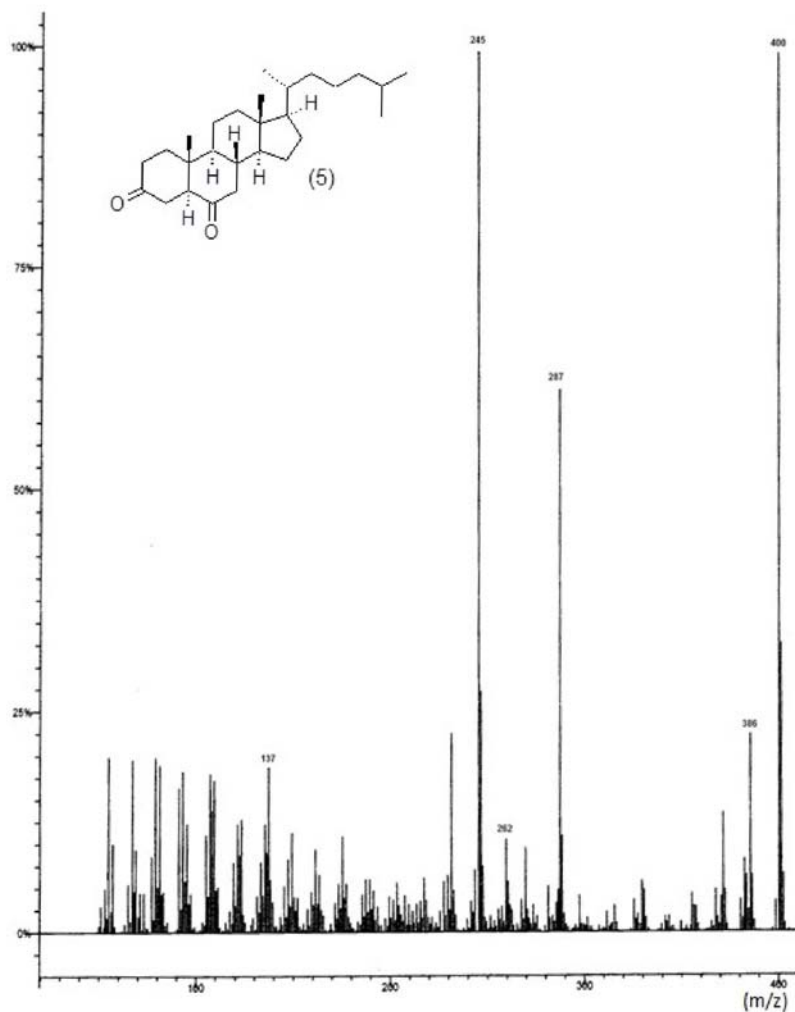


Figura 6S. EI-MS spectrum of 3,6-cholestandione (5)

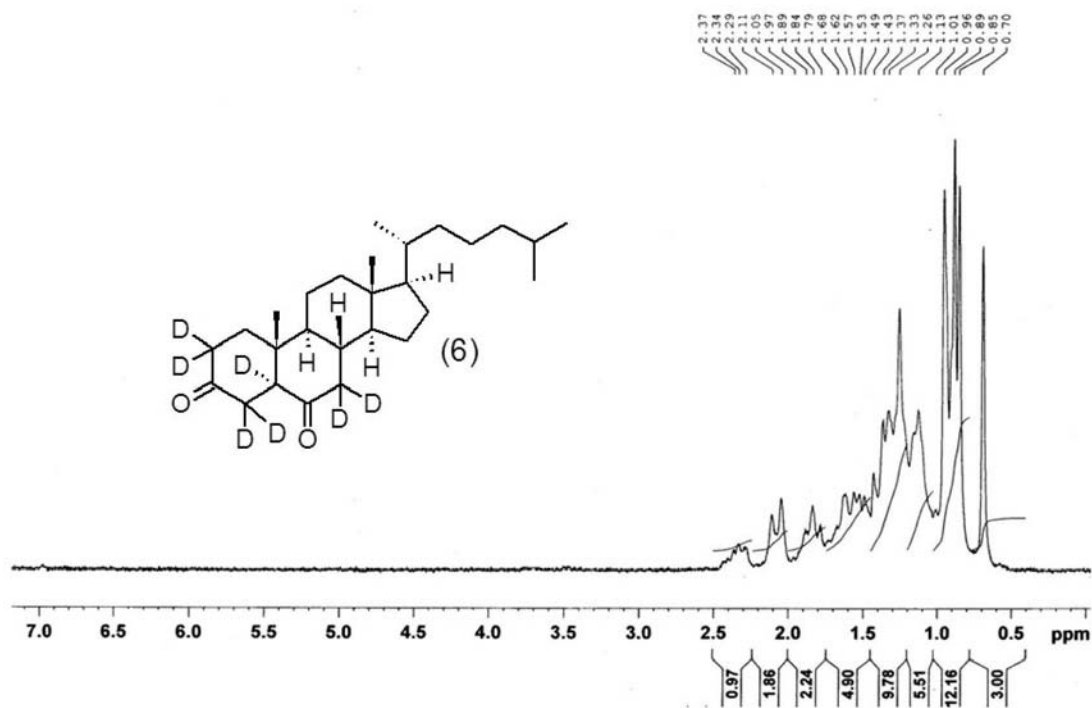


Figura 7S. ¹H NMR spectrum of 3,6-cholestandione-2,2,4,4,5,7,7-d₇ (6), 200 MHz, CDCl₃

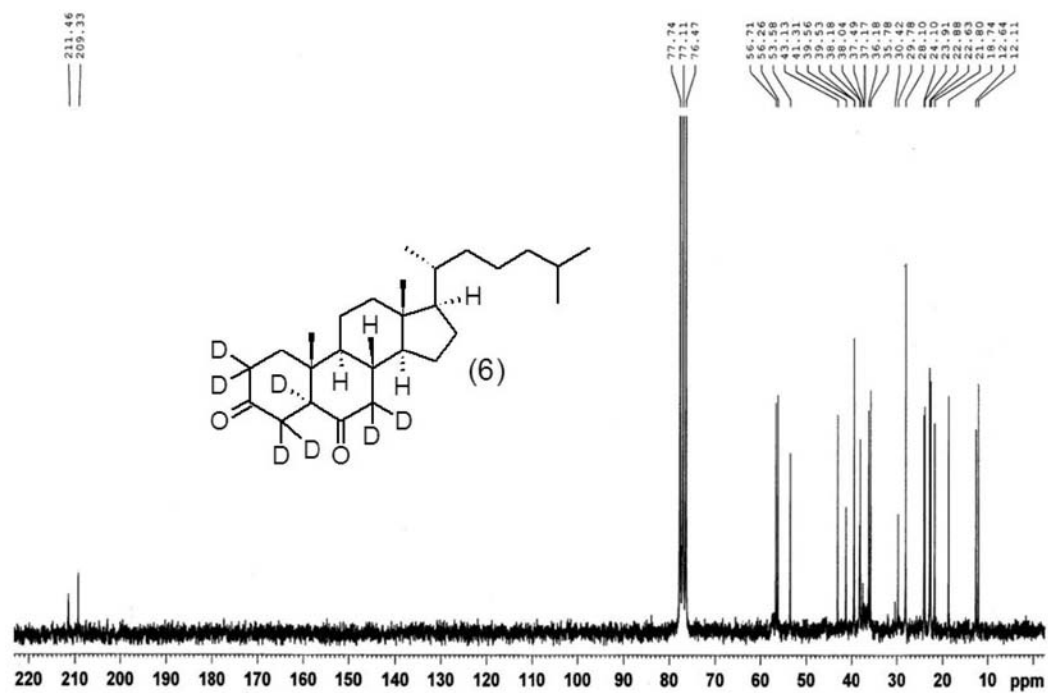


Figura 8S. ¹³C NMR spectrum of 3,6-cholestandione-2,2,4,4,5,7,7-d₇ (6), 50 MHz, CDCl₃

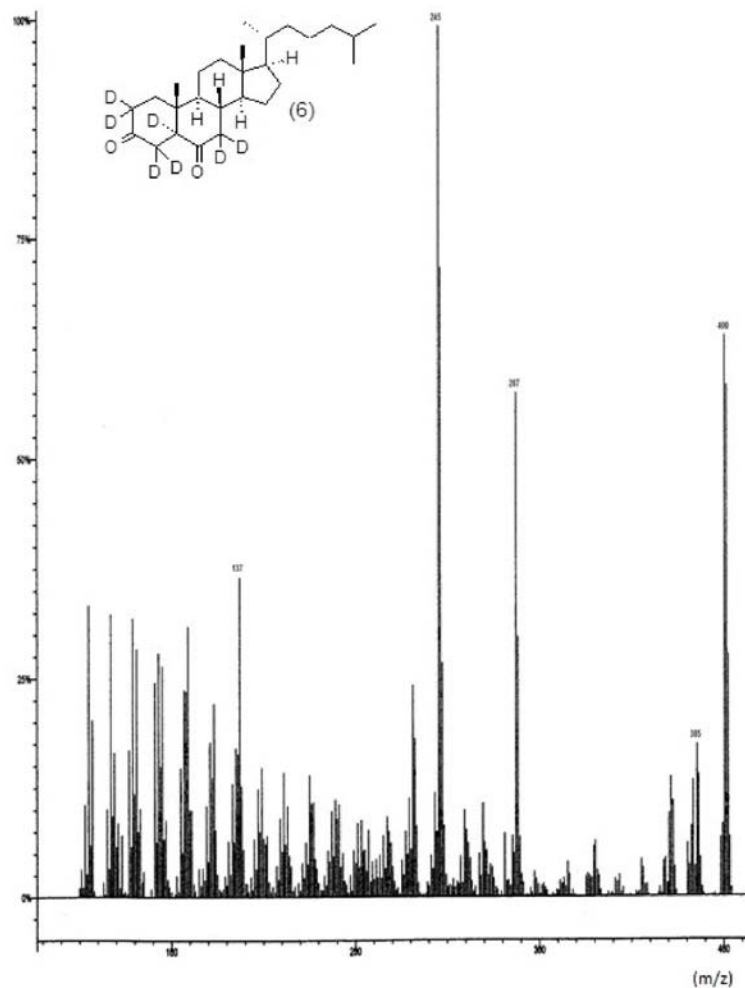


Figura 9S. EI-MS spectrum of 3,6-cholestandione-2,2,4,4,5,7,7-d₇ (6)

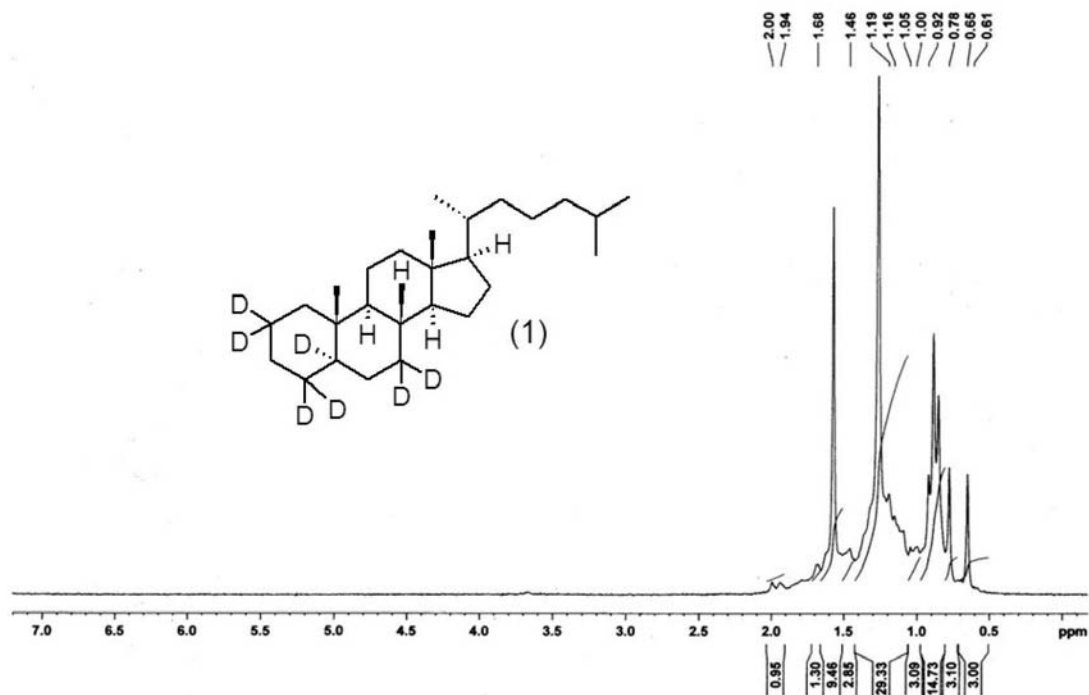


Figura 10S. ¹H NMR spectrum of cholestane-2,2,4,4,5,7,7-d₇ (1), 200 MHz, CDCl₃

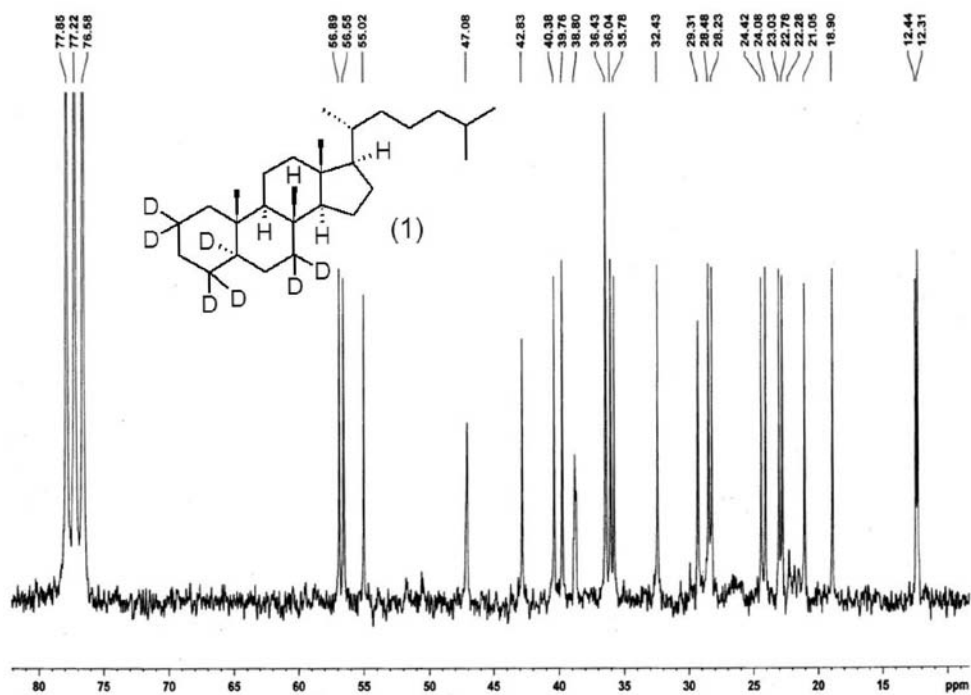


Figura 11S. ^{13}C NMR spectrum of cholestane-2,2,4,4,5,7,7- d_7 (1), 50 MHz, CDCl_3

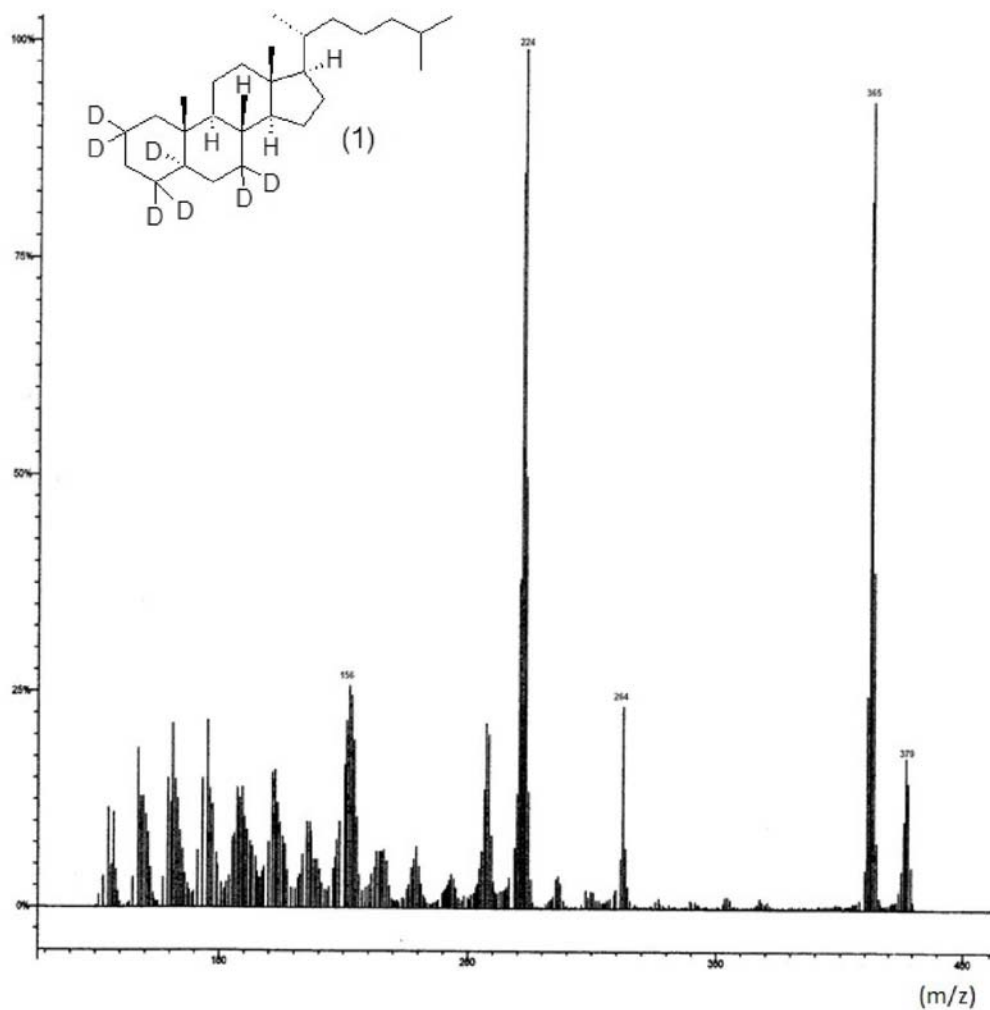


Figura 12S. EI-MS spectrum of cholestane-2,2,4,4,5,7,7- d_7 (1)