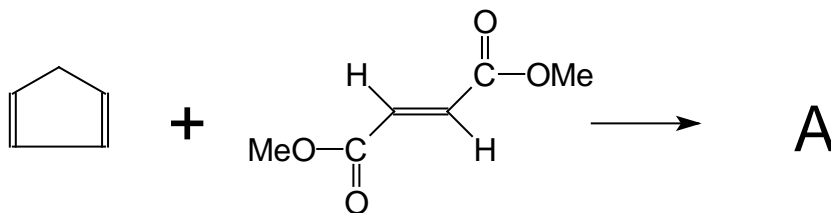
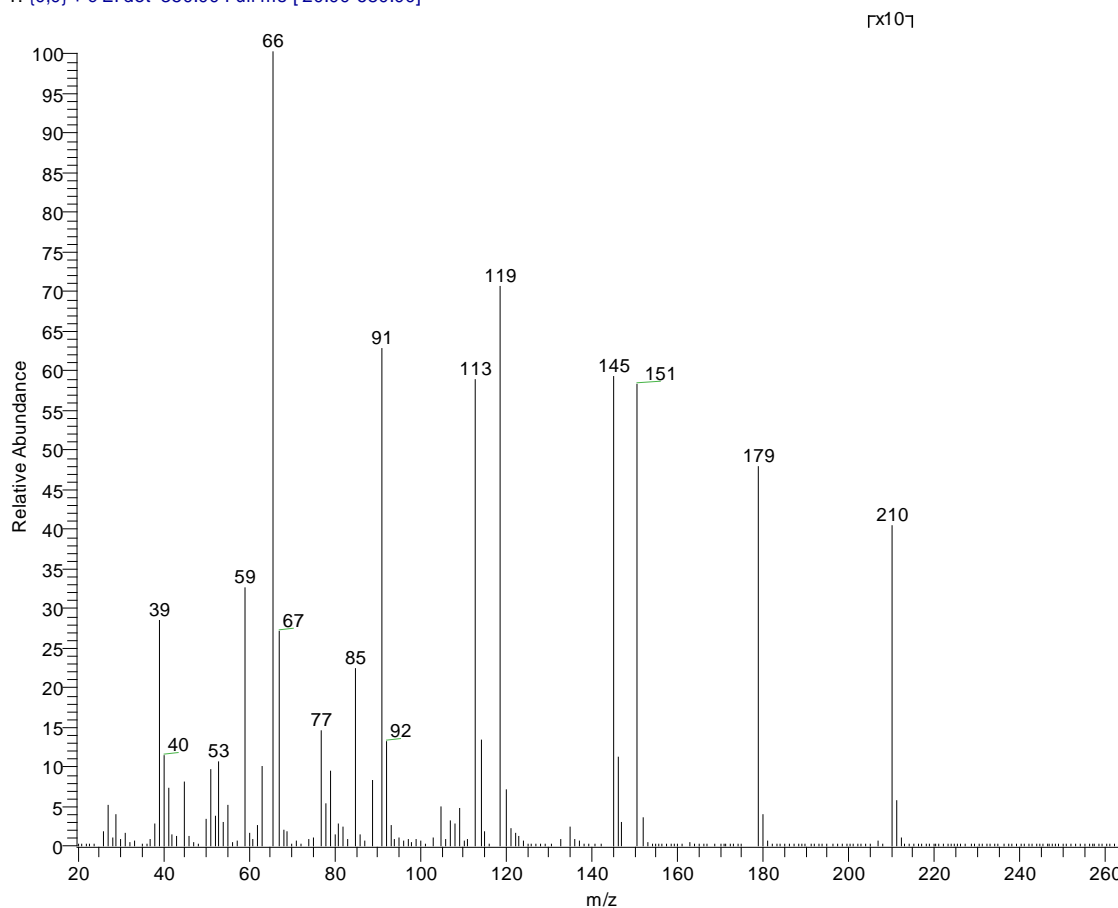


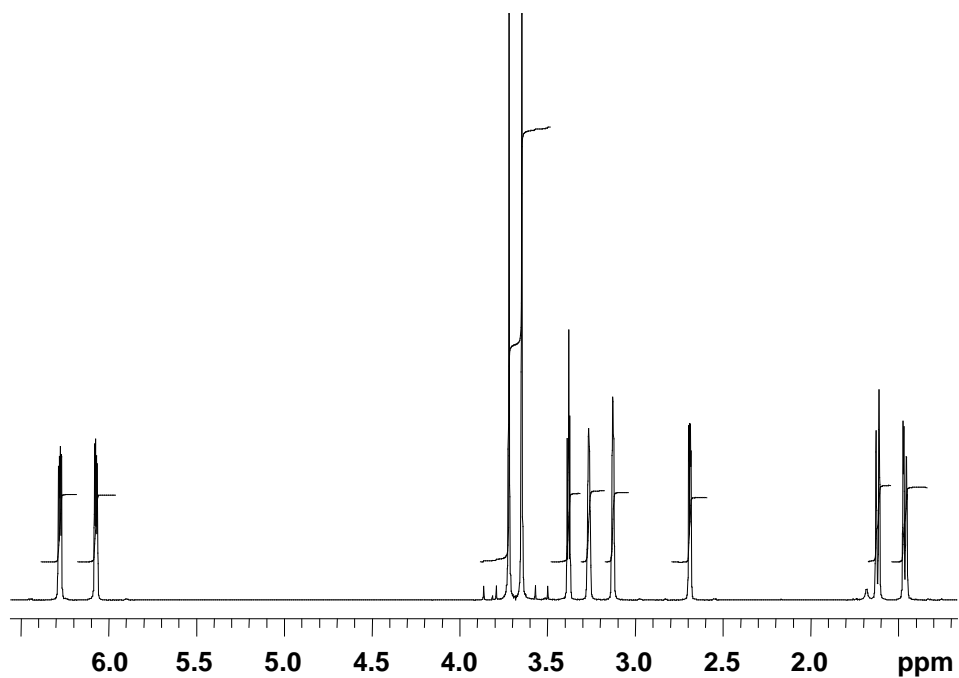
The Diels-Alder reaction of cyclopentadiene with dimethyl fumarate (*trans*-1,2-ethylenedicarboxylic acid dimethyl ester) gives the product A.



You are provided with the Mass Spectrum (EI mode), the ^1H NMR spectrum and ^1H - ^1H COSY (500 MHz; CDCl_3). Identify the product, A, and account for the features of the spectra as fully as possible. (A simple 3D model of your postulated structure would help with the assignments).

AK_SAMPLE #1391 RT: 14.21 AV: 1 SB: 1 13.85 NL: 8.71E6
T: {0,0} + c EI det=350.00 Full ms [20.00-680.00]





1H proton spectrum

