

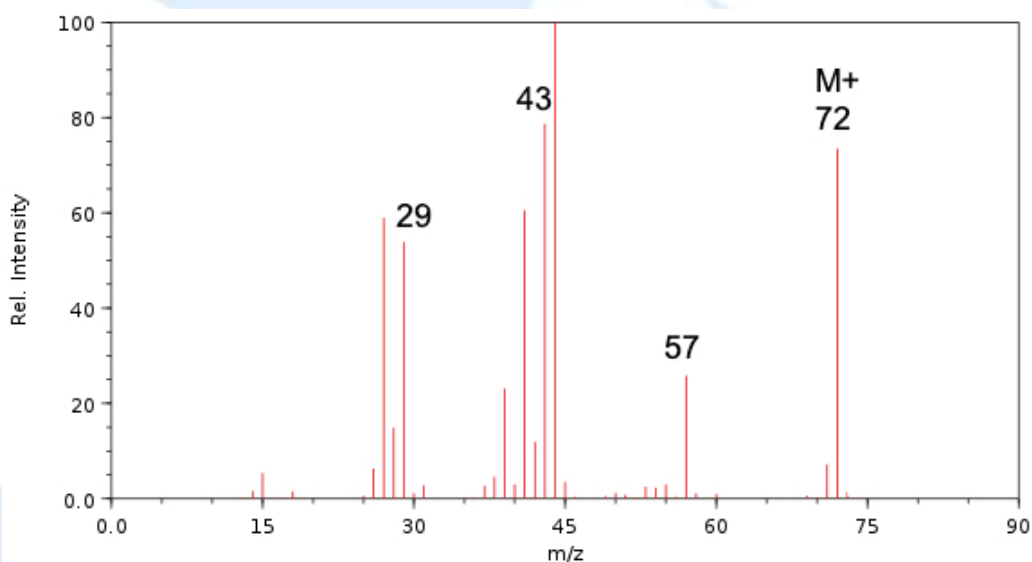
SL & HL Spectroscopic identification of organic compounds: Question 9

Identify **Compound I** from the data (a – d) given and explain how you arrived at your answer

(a) Elemental analysis of Compound I

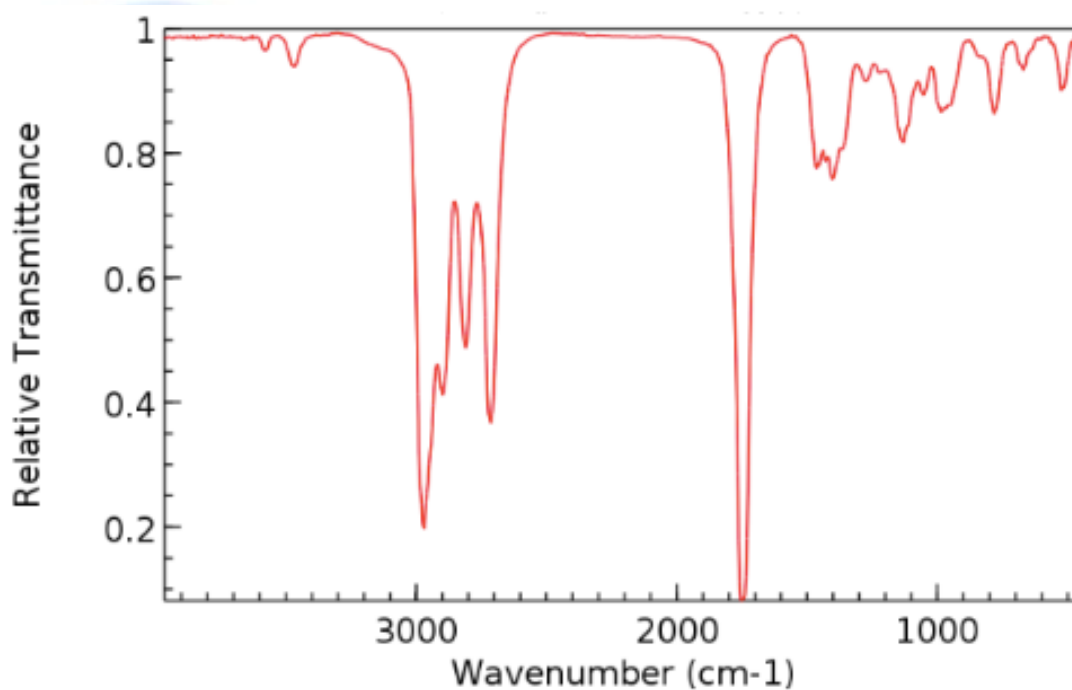
Element	Percentage by mass
Carbon	66.61
Hydrogen	11.20
Oxygen	22.19

(b) Mass spectrum of Compound I



NIST Chemistry WebBook (<https://webbook.nist.gov/chemistry>)

(c) Infrared spectrum of **Compound I**



NIST Chemistry WebBook (<http://webbook.nist.gov/chemistry>)

(d) Information about **Compound I** from ^1H NMR spectrum

Position of signal / δ ppm	Integration trace
0.9	3
1.7	2
2.4	2
9.8	1