

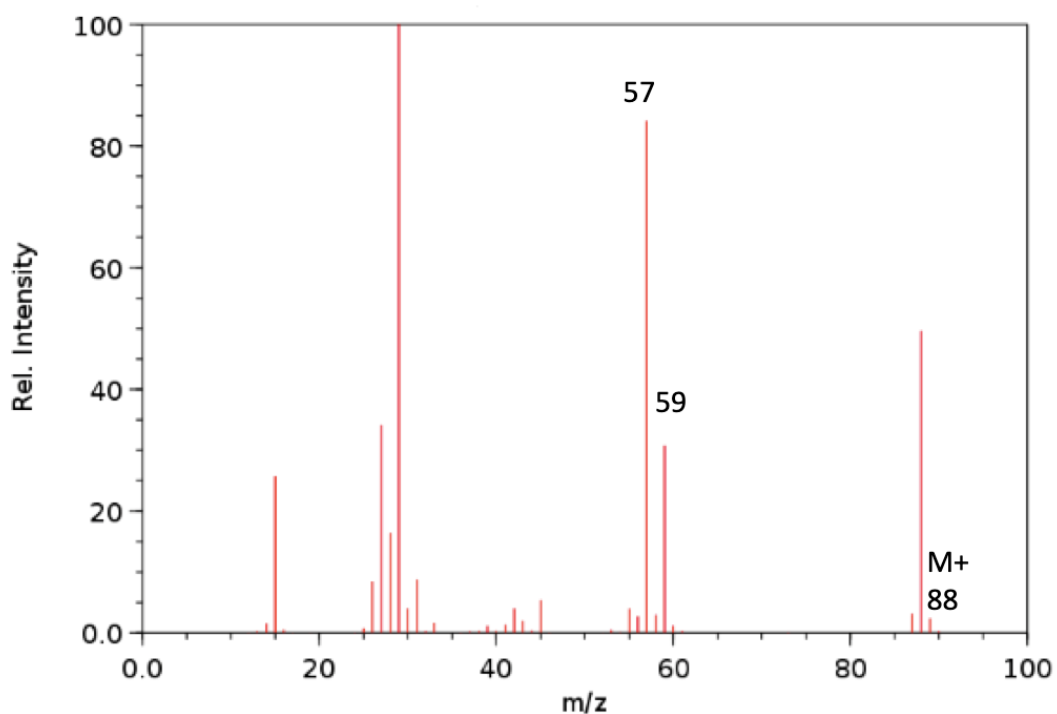
HL Spectroscopic identification of organic compounds: Question 19

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

(a) Elemental analysis of Compound S

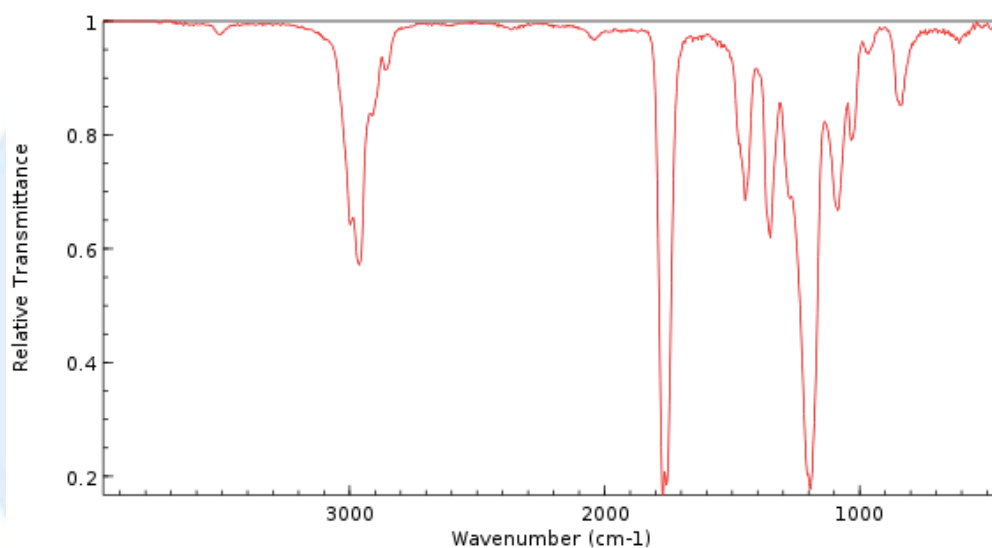
Element	Percentage by mass
Carbon	54.52
Hydrogen	9.17
Oxygen	36.31

(b) Mass spectrum of Compound S



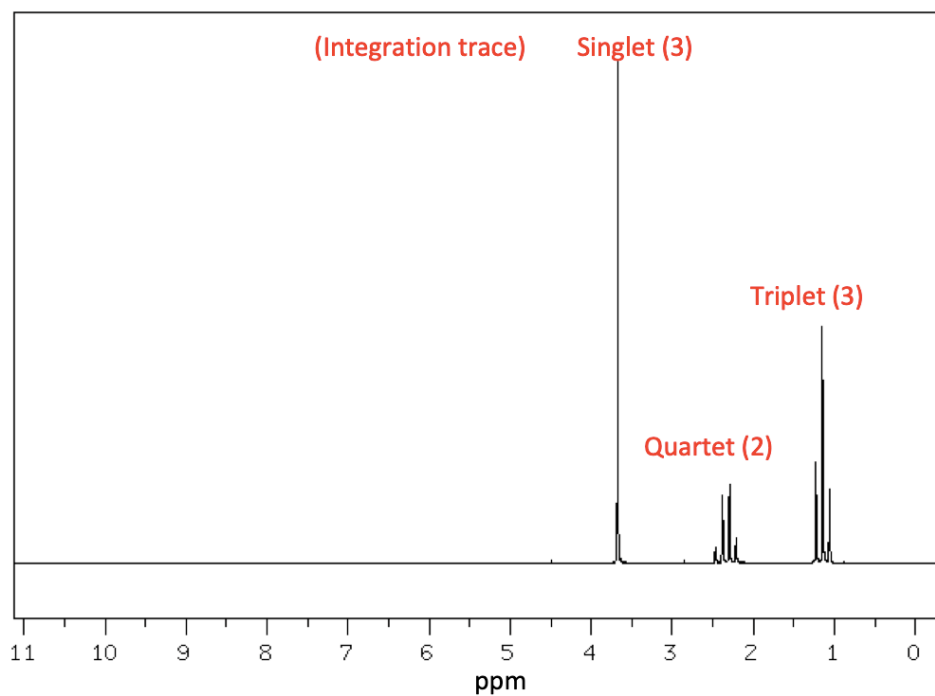
NIST Chemistry WebBook (<https://webbook.nist.gov/chemistry>)

(c) Infrared spectrum of Compound S



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

d) ^1H NMR spectrum of Compound S



Source: https://www.chemicalbook.com/SpectrumEN_554-12-1_1HNMR.htm