

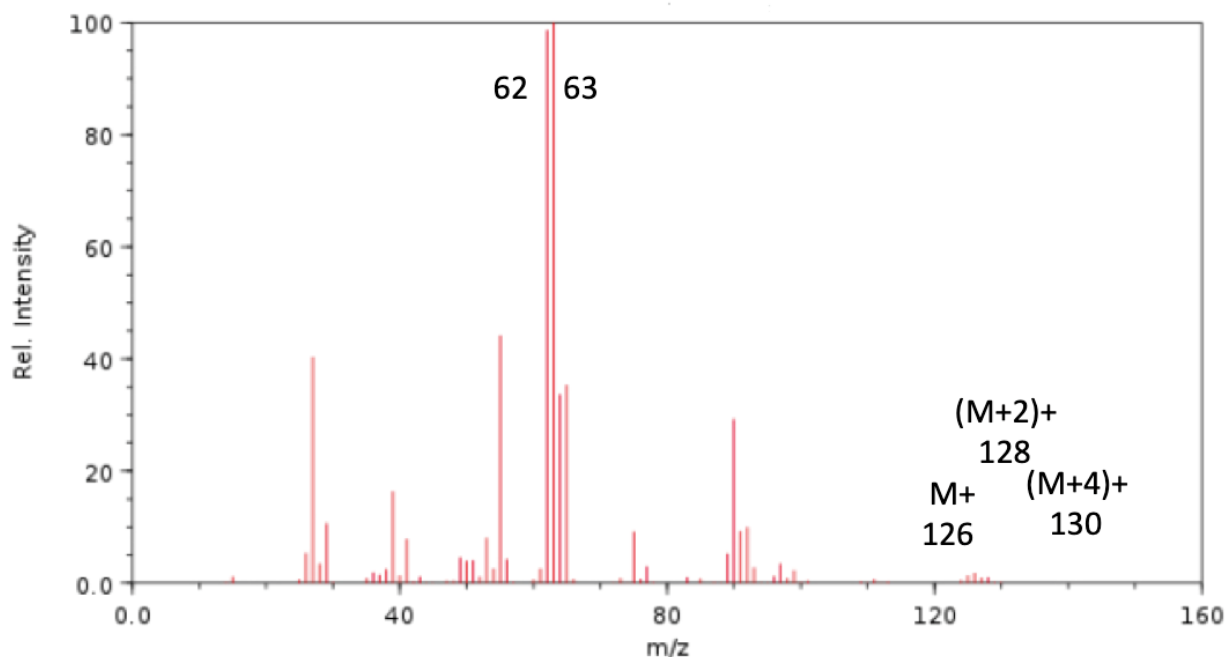
HL Spectroscopic identification of organic compounds: Question 18

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

(a) Elemental analysis of compound R

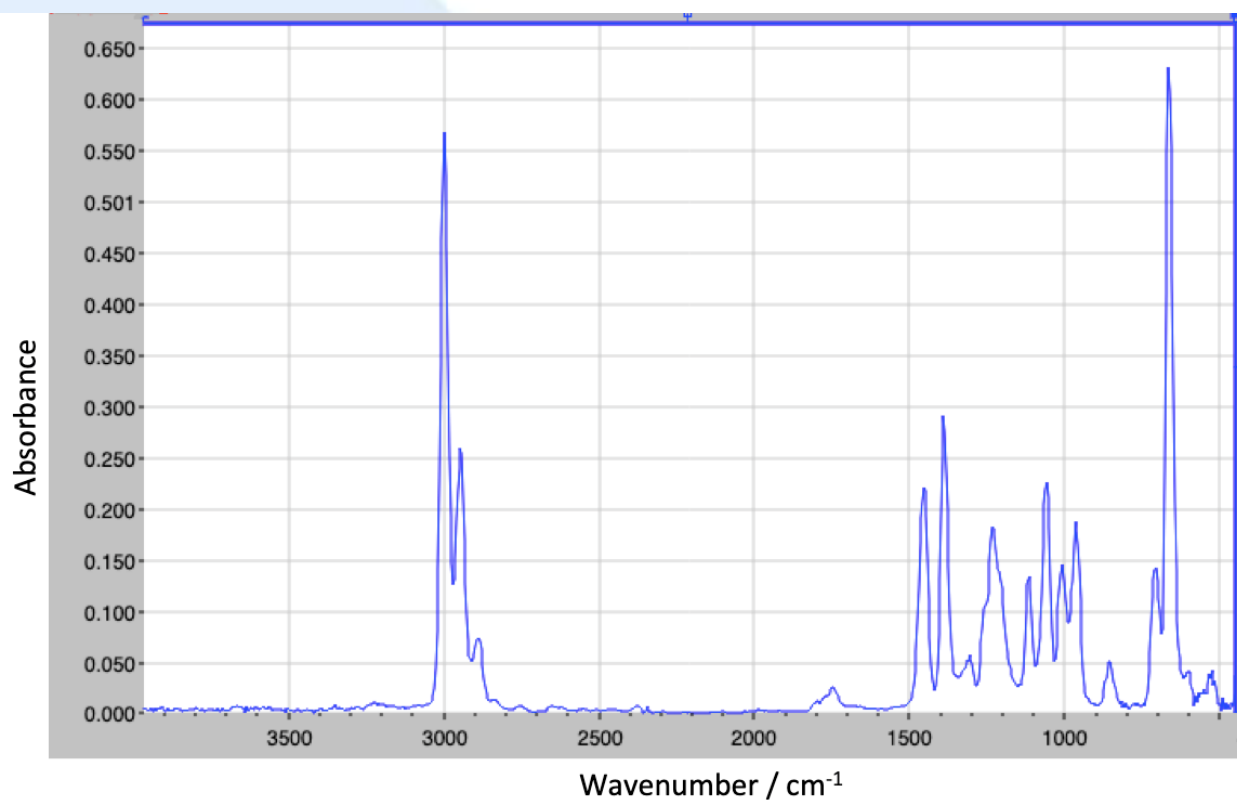
Element	Percentage by mass
Carbon	37.82
Hydrogen	6.36
Chlorine	55.82

(b) Mass spectrum of Compound R



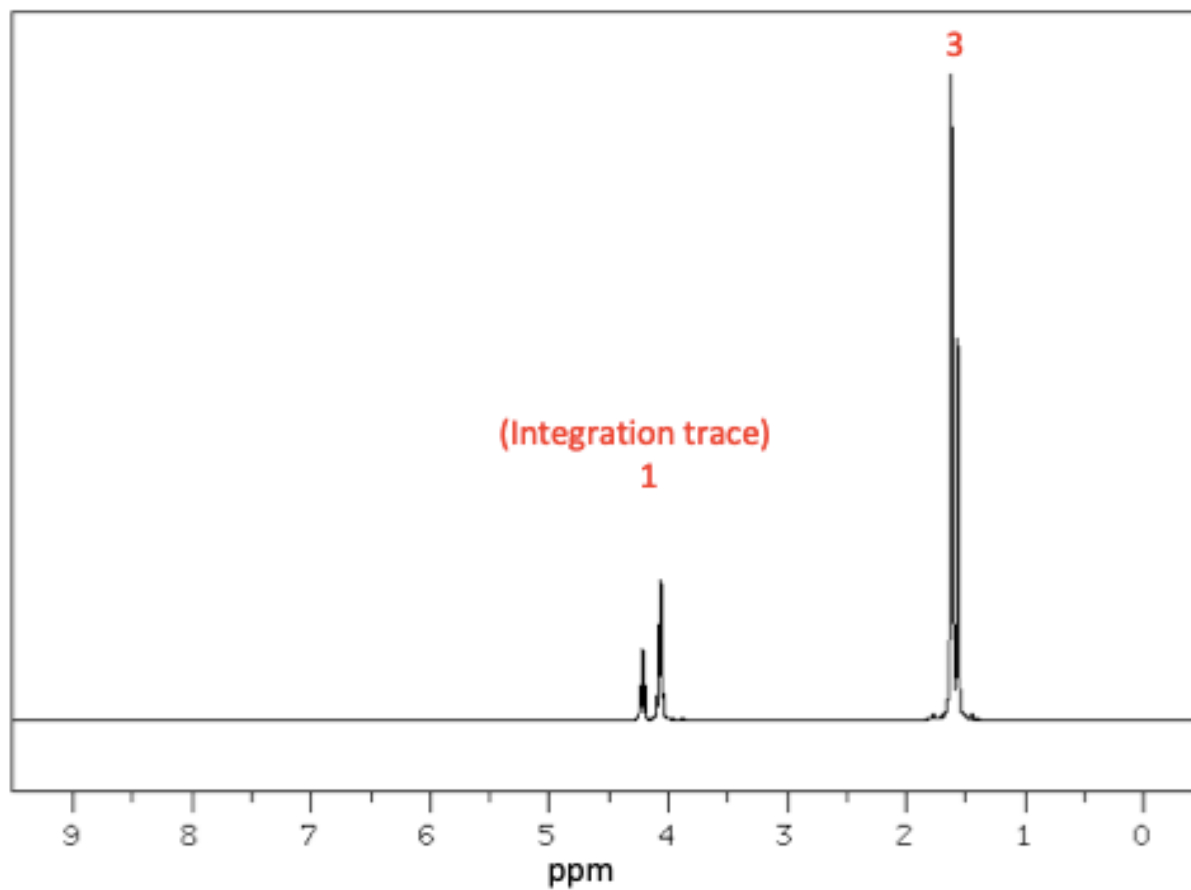
NIST Chemistry WebBook (<https://webbook.nist.gov/chemistry>)

(c) Infrared spectrum of **Compound R** (Note that it shows absorbance rather than the more usual % transmission)



Source: <http://www.chemspider.com/Chemical-Structure.22655.html>

(d) ^1H NMR spectrum of **Compound R**



Source: https://www.chemicalbook.com/SpectrumEN_7581-97-7_1HNMR.htm

