

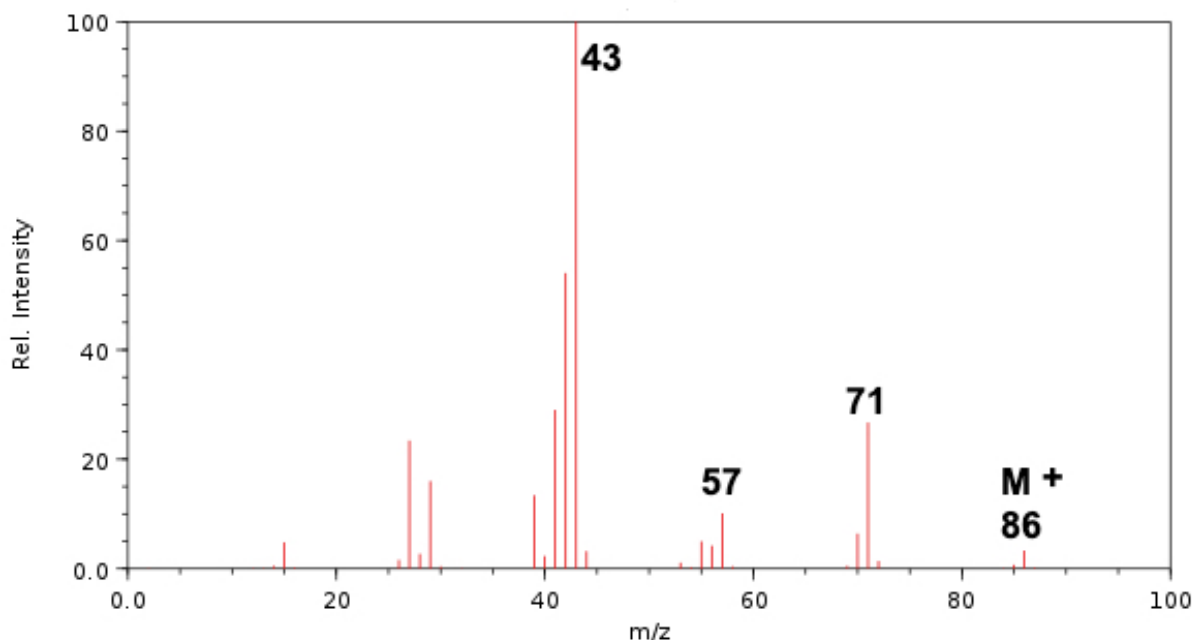
## SL & HL Spectroscopic identification of organic compounds: Question 7

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

(a) Elemental analysis of **Compound G**.

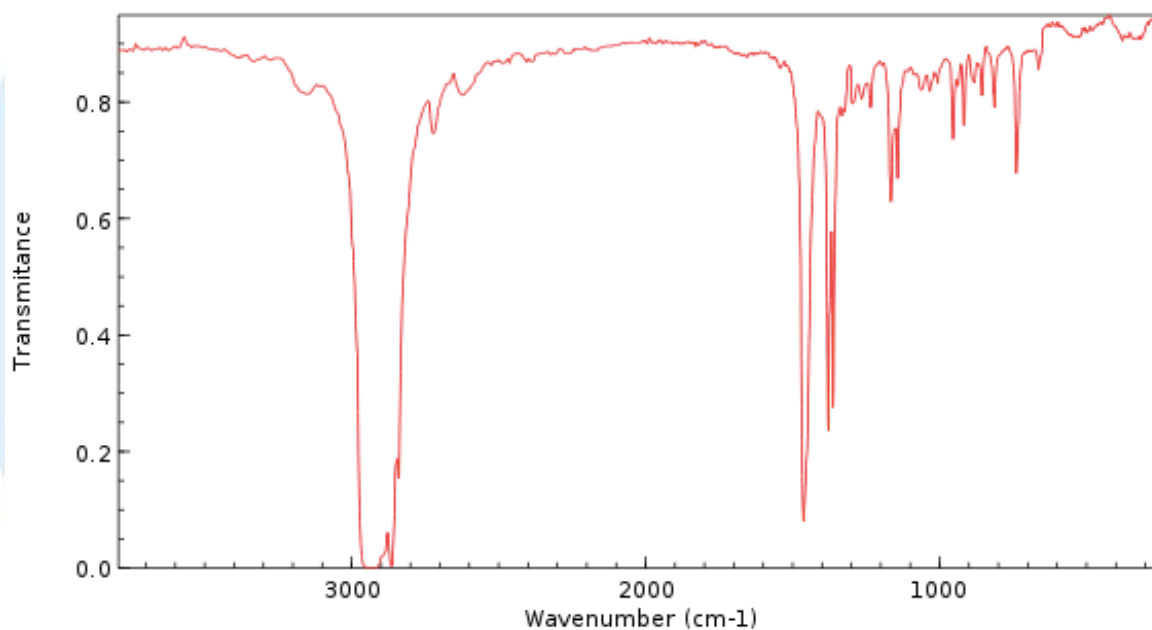
Element	Percentage by mass
Carbon	83.60
Hydrogen	16.40

(b) Mass spectrum of **Compound G**



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

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



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

**(d) Information from  $^1\text{H}$  NMR spectrum of Compound G**

Position of signals / $\delta$ ppm	Integration traces
Five signals all between 0.9 and 1.5	1:2:2:3:6