

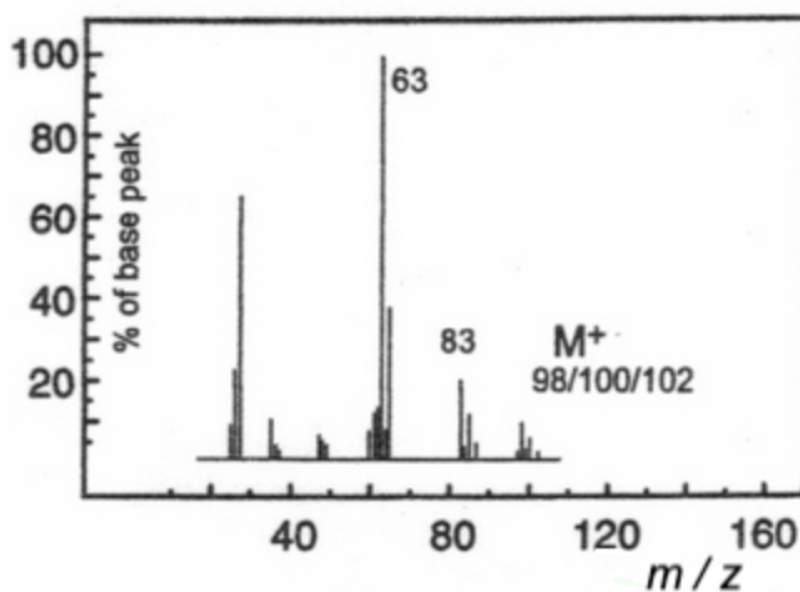
SL & HL Spectroscopic identification of organic compounds: Question 1

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

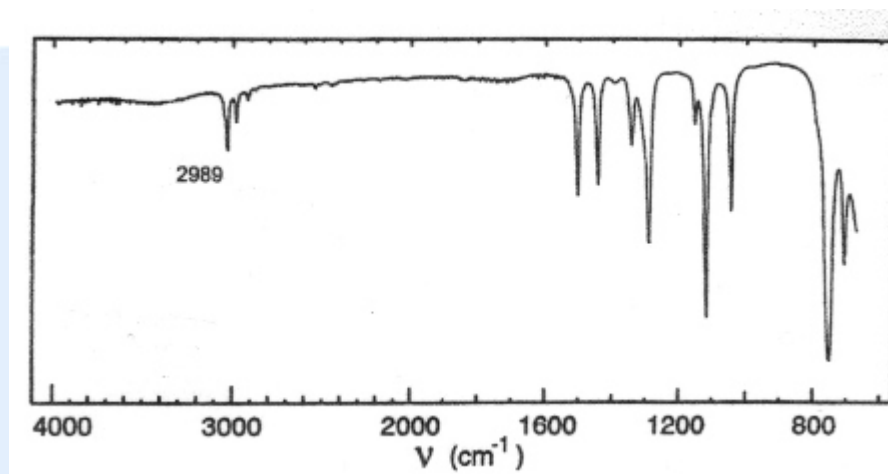
(a) Elemental analysis of **Compound A**

| Element | Percentage by mass |
|----------|--------------------|
| Carbon | 24.3 |
| Hydrogen | 4.1 |
| Chlorine | 71.6 |

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



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



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

| Position of signal / δ ppm | Integration trace |
|-----------------------------------|-------------------|
| 2.0 | 3 |
| 5.8 | 1 |