

Video worksheet – match the spectra

Consider the structural formulae of the compounds shown below. Using the ^1H NMR spectra identify which molecule belongs to which spectrum.

A

$$\begin{array}{c} \text{H}_3\text{C} \quad \text{CH}_3 \\ | \quad | \\ \text{H}_3\text{C}-\text{CH}-\text{CH}-\text{CH}_3 \end{array}$$

B

$$\text{H}_3\text{C}-\text{CH}_2-\overset{\text{O}}{\parallel}{\text{C}}-\text{O}-\text{CH}_2-\text{CH}_2-\text{CH}_3$$

C

$$\text{CH}_3-\text{CH}_2-\text{CH}_2-\overset{\text{O}}{\parallel}{\text{C}}-\text{O}-\text{CH}_2-\text{CH}_3$$

D

$$\begin{array}{c} \text{O} \quad \text{CH}_3 \\ \parallel \quad | \\ \text{H}_3\text{C}-\text{C}-\text{O}-\text{CH}_2-\text{CH}-\text{CH}_3 \end{array}$$

E

$$\begin{array}{c} \text{CH}_3-\text{CH}_2-\text{CH}-\text{CH}_2-\text{CH}_3 \\ | \\ \text{COOH} \end{array}$$

F

$$\begin{array}{c} \text{CH}_3 \\ | \\ \text{CH}_3-\text{C}-\text{CHO} \\ | \\ \text{CH}_3 \end{array}$$

G

$$\begin{array}{c} \text{CH}_3 \quad \text{O} \\ | \quad \parallel \\ \text{CH}_3-\text{CH}-\text{C}-\text{CH}_3 \end{array}$$


