

# 2025 Ch H1 Q5

Section: Nature's Chemistry

Topic: Alcohols

## Question summary

Identify which compound is a tertiary alcohol.

## Worked solution

A tertiary alcohol is one in which the carbon atom carrying the -OH group is attached to three other carbon atoms.

A 2-methylpentan-1-ol: -OH on carbon 1 -> primary.

B 2-methylpentan-2-ol: -OH on carbon 2, bonded to three other carbons -> tertiary.

C 2-methylpentan-3-ol: -OH on carbon 3 -> secondary.

D 4-methylpentan-2-ol: -OH on carbon 2 -> secondary.

## Final answer

**B. 2-methylpentan-2-ol**

## Revision tips

- Classify alcohols by the number of alkyl groups attached to the carbon bearing the -OH group: 1=primary, 2=secondary, 3=tertiary.

- Tertiary alcohols are resistant to oxidation to aldehydes or carboxylic acids.

- When unsure, draw the structure and count how many carbons bond to the -OH carbon.