

2024 Higher Chemistry Paper 1 - Q7

Section: Nature's Chemistry

Topic: Alcohols

Question summary (Q7):

A compound has molecular formula C_4H_7OH and reacts with acidified potassium dichromate. Which type of alcohol is it?

Worked Solution:

- Molecular formula C_4H_7OH suggests an alcohol with one double bond (unsaturated).
- The fact it reacts with acidified potassium dichromate shows it is not a tertiary alcohol (tertiary alcohols resist oxidation).
- Therefore it must be a secondary alcohol that is also unsaturated.

Final Answer: C — an unsaturated secondary alcohol

Revision Tips:

- Acidified potassium dichromate oxidises primary and secondary alcohols, but not tertiary ones.
- Unsaturated compounds contain $C=C$ bonds.
- Always check oxidation behaviour to distinguish secondary from tertiary alcohols.