

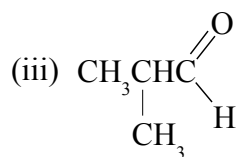
Chemguide – answers

ALDEHYDES AND KETONES: MAKING THEM

1. a) Potassium (or sodium) dichromate(VI) solution acidified with dilute sulphuric acid. The mixture would turn from an orange solution to a green one.

b) (i) $\text{CH}_3\text{CH}_2\text{CHO}$ (In an exam, you should show the aldehyde group in full as in (iii) below)

(ii) $\text{CH}_3\text{CH}_2\text{C}(\text{O})\text{CH}_3$ (For most purposes you could also use $\text{CH}_3\text{CH}_2\text{COCH}_3$, but in an exam don't take the chance.)



c) (i)
$$\begin{array}{c} \text{CH}_3\text{CH}_2\text{CH}_2\text{CHCH}_3 \\ | \\ \text{OH} \end{array}$$

(The -OH group has to be on a carbon atom next to an end CH_3 group, but it doesn't matter whether you draw it near the left-hand end or the right-hand end.)

(ii) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$

d) Use an excess of ethanol, and distill off the ethanal as soon as it is formed.