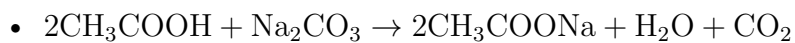


Solutions

Each answer shows the steps, then the **result**.

2.1



2.2

- add a carbonate (e.g. sodium carbonate); effervescence / fizzing of CO_2 is seen

3.1 B

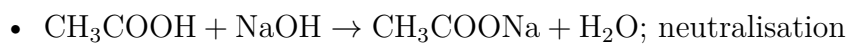
- LiAlH_4 reduces a carboxylic acid to a primary alcohol

3.2 B

- A reactive metal gives a salt and hydrogen

3.3

(a)



(b)

- acidified $\text{K}_2\text{Cr}_2\text{O}_7$ (or KMnO_4); heat under reflux

3.4

- carboxylic acids are acidic — they release H^+ which reacts with the carbonate to give CO_2 ; alcohols are not acidic enough to react with a carbonate