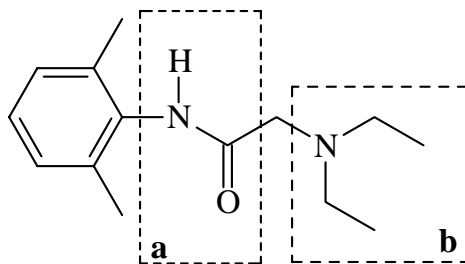


**Marks**  
**7**

- The structure of lignocaine, a local anaesthetic, is given below.



Give the molecular formula of lignocaine.

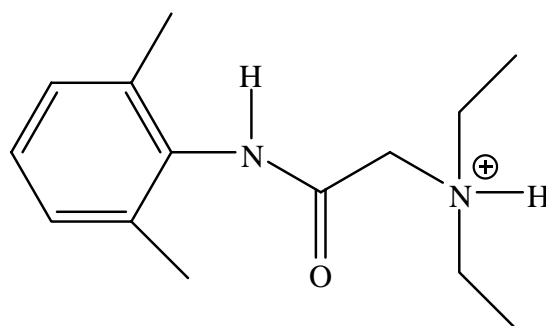


Name the functional groups in lignocaine indicated by boxes “a” and “b”.

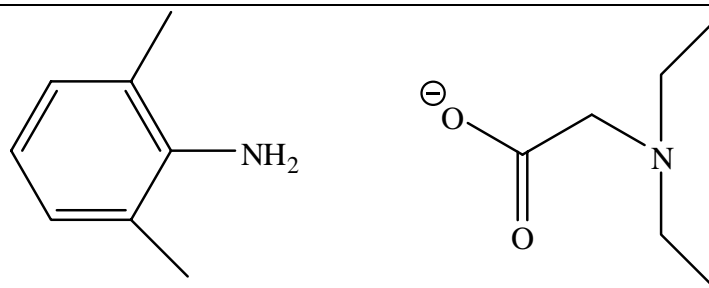
**a: amide**
**b: tertiary amine**

Give the structure(s) of all organic products formed when lignocaine is treated with the following reagents. If no reaction occurs, write “NO REACTION”.

cold HCl (1 M)



hot NaOH (4 M)



hot HCl (4 M)

