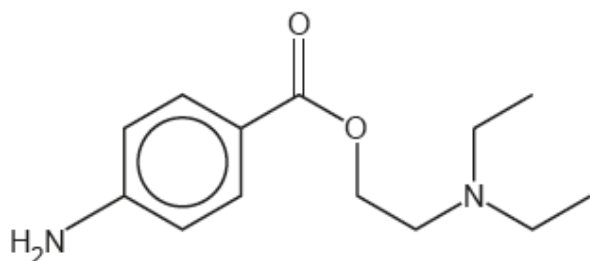


A Level Chemistry B (Salters)
H433/01 Fundamentals of chemistry

Question Set 18

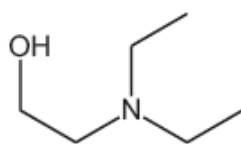
- 1 (a) (i) Procaine has been used as an anaesthetic in dentistry.



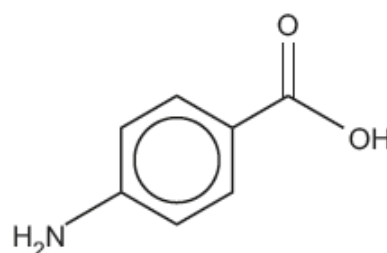
Procaine

Some students reacted procaine with various reagents to see if they could make other useful substances from it.

They hydrolysed procaine, producing a solution containing compound **B** and the **sodium salt** of compound **C**.



compound B



compound C

State at room temperature:

liquid

solid

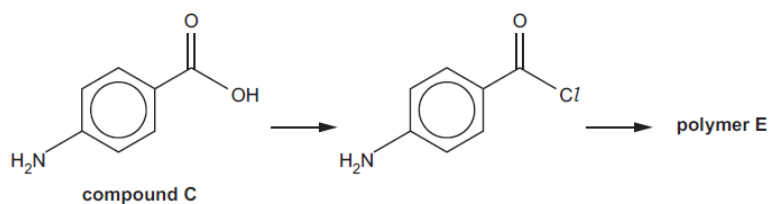
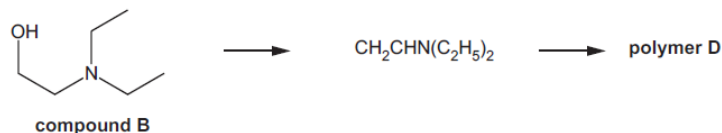
Suggest the reagent and conditions the students used for the hydrolysis. [1]

- 1 (a) (ii) Suggest how the students could obtain a sample of compound **C** from the solution they obtained. [2]

- 1 (a) (iii) The students reacted procaine with ethanoyl chloride.

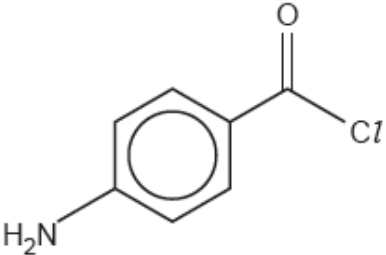
Give the formula of the organic product formed. [1]

- (b) Compounds **B** and **C** can be turned into monomers for polymerisation reactions.



Give the structural formula for the repeat units of polymers **D** and **E** and give the **type** of polymerisation occurring in each case.

[2]

Monomer	Repeat unit of the polymer	Type of polymerisation
$\text{CH}_2\text{CHN}(\text{C}_2\text{H}_5)_2$	Polymer D	
	Polymer E	

Total Marks for Question Set 18: 6

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