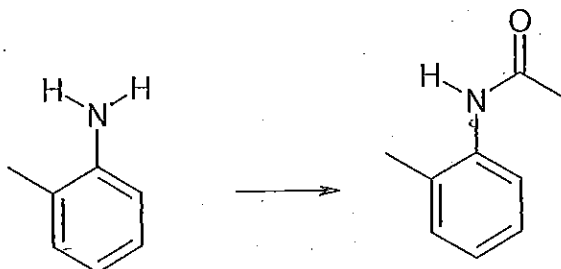


Synthesis of N- acetyl-o-toluidine

This practical introduces the technique of protection of amines to amides as well as separating funnel, rotary evaporator usage and recrystallisation skills.



Method:

In a dry 100 ml Erlenmeyer flask, add acetyl chloride (3.32 ml, 46.7 mmol) slowly to a stirred solution of o-toluidine (5 g, 46.7 mmol) and pyridine (9.8 mL, 121.4 mmol) in DCM (50 ml) at 0°C. The mixture is then stirred for 1 hour at 0°C and then allowed to warm to room temperature. The organics are then transferred to a separating funnel, washed with 2M hydrochloric acid (2 x 50 ml), water (50 ml) and twice with brine (2 x 25 ml), dried over MgSO₄ and filtered and the solvent removed under reduced pressure on a rotary evaporator to give N- acetyl-o-toluidine. Recrystallise if necessary from dichloromethane, ethyl acetate or ethanol and record final mass, melting point and infra-red.

Questions

- 1) What is the role of pyridine in the reaction
- 2) Provide a mechanism for this reaction