Reagent	Quantity
D-Glucose	1 g
Acetic Anhydride	5 mL
Sodium Acetate	1 g
Ethanol	25 mL
Ice	---------
Glassware and Equipment	Quantity
25 mL Round Bottom Flask	1
Calcium Chloride Drying Tube (for use on reflux condenser)	1
Hot Plate with Magnetic Stir Bar	1
Reflux Condenser	1
Buchner Funnel	1
100 mL Flask with Vacuum Adapter	1

Procedure.

1. In a 25 mL single-neck round-bottom flask, equipped with a reflux condenser with a calcium chloride tube, add 1 g of glucose, 5 ml of acetic anhydride and 1 g of anhydrous sodium acetate.
2. Reflux for 10 minutes, then cool the solution by pouring it into 30 ml of ice-cold water.
3. Filter the precipitated crystals in a Buchner funnel. Wash the crystals with water.
4. Recrystallize the product from ethanol then dry it in a Petri Dish for 30 minutes.

1.1 Weigh the product.
The mass of the petri dish with the product _____ g
Weight of empty petri dish _____ g
Product weight _____ g
1.2 What is the role of sodium acetate?
1.3 Draw a reaction scheme for the interaction of glucose pentaacetate with ethereal hydrogen bromide followed by treatment with sodium phenolate.
1.4 Draw linear and cyclic (β-pyranose and α-furanose) forms of D-glucose.