
Preparation of Acetaldehyde

Lab 38

PURPOSE

To prepare acetaldehyde by the oxidation of ethyl alcohol.

EQUIPMENT

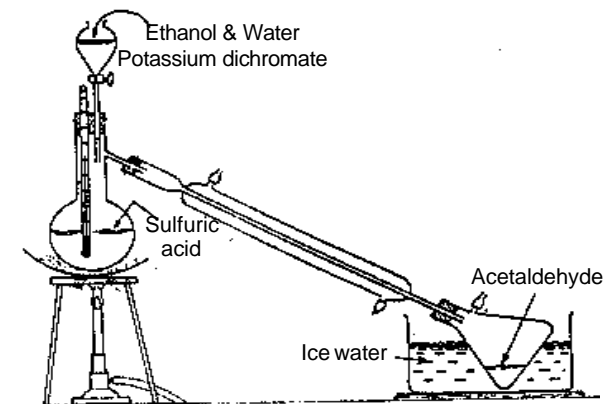
distillation flask	water-cooled condenser
filtration flask	test tubes
ice-bath	

MATERIALS

concentrated H_2SO_4	$\text{K}_2\text{Cr}_2\text{O}_7$
ethyl alcohol	

PROCEDURE

1. Set up the apparatus as shown in the figure.
2. Prepare a mixture of 10ml of conc. H_2SO_4 and 25ml pure water.
3. Place the mixture into the distillation flask.
4. Prepare a mixture of 20g of powdered $\text{K}_2\text{Cr}_2\text{O}_7$, 25ml of water and 20ml of $\text{C}_2\text{H}_5\text{OH}$.
5. Put this solution in the tap funnel.
6. Heat the distillation flask gently to boil.
7. Allow the solution from the tap funnel to fall drop-wise while the solution in the flask boils.
8. Collect the distillate in a filtration flask placed in ice-cold water.
9. Put out the burner after 5 minutes when the addition of all solution completed.



QUESTIONS

1. Write the equations for this experiment.