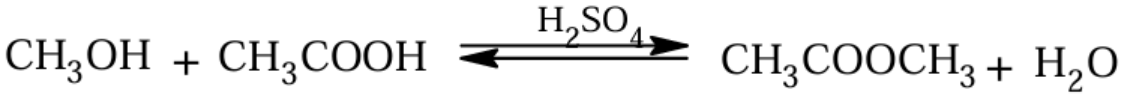
# METHYL ACETATE



***Reagents:***

anhydrous methanol - 18 ml
conc. $CH_3COOH$ – 26 ml
conc. $H_2SO_4$ – 1 ml
NaCl
$NaHCO_3$
$MgSO_4$

***Apparatus:***

round-bottomed flask 100 ml
reflux condenser
beakers 50 ml, 100ml
Vigreaux column
conical flask with stopper 100 ml
condenser with distillation insert
separating funnel 100 ml
glass and PP funnel
glass rod
ground-glass thermometer up to $150^0C$

**Preparation:**

18ml of anhydrous methanol, 26ml of glacial acetic acid and 1ml of concentrated $H_2SO_4$ are placed in a round-bottomed flask (**the glass MUST BE DRY!!!**) and heated at boiling point under a reflux condenser for 5 hours.

The crude product is then distilled from the reaction mixture at 55-56$^oC$ using a fractional distillation apparatus. The ester is:

- washed once with a small amount of water,
- saturated with salt, washed with a saturated sodium bicarbonate solution
- and saturated again with salt.

The ester layer is dried with anhydrous magnesium sulphate and distilled, collecting the methyl acetate at 55-56$^oC$.