PRACTICE

Crystalization of Impure Acetanilide

0.5 g of dirty acetanilide is weighed. It is added as soluable as water on it in the beaker and is heated burner until boiling. While boiling, it is added a bit of activated charcoal, and then (later 1-2 minutes) it is filtered through plated filter-paper (on the funnel and tripot). The filtrate is left (at the window edge) to crystallize. The resulting crystals are filtered through (a Buchner funnel or) a flat filter-paper, and then dried in the incubator or in the room heat. At end of the practice, the melting point (M.P.) is determined through a gun tube. Each pure chemical material has a fixed melting point. If this value is not reached as a result of the experiment, the purification process is repeated.

For the determination of the M.P., one terminal of a capillary tube is closed, the result material is put from other side (opened terminal) into the capillary tube. Capillary tube is connected to termometer and they are put into the gun tube. One of the substances which has high boiling point and can distribute the heat homogeneously like liquid vaseline, glycerin (glycerol), liquid paraffin, is put into the gun tube and it is heated down via burner.

Acetanilide: $C_6H_5NHCOCH_3$

Acetanilide M.P.: 113-115°C

Questions

1. Write how to separate impurities in the crystallization process.
2. List the properties of the solvent to be used in the crystallization.
3. What can be done in the crystallization to remove the color of the colored product and prevent oil formation?