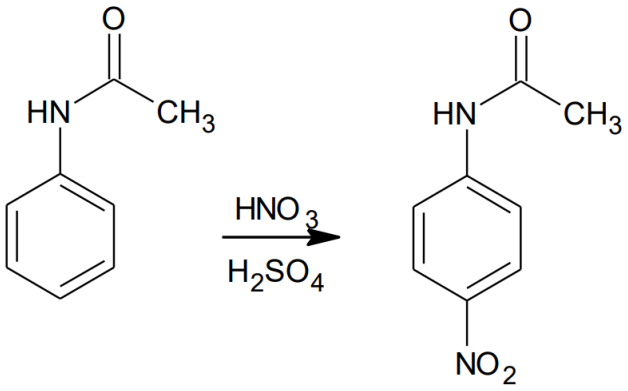
4-NITROACETANILIDE



Reagents:

- acetanilide 3.5 g (0.025 mole)
- H_2SO_4 conc. (7.5 ml + 1.25 ml)
- HNO_3 conc. (2.0 ml)
- ethanol

Apparatus:

- 100 ml conical flask
- beaker 25 ml, 100 ml
- 100 ml round-bottomed flask
- reflux condenser
- crystallizer
- funnel
- glass rod
- stirrer
- petri glass

Into a 100mL conical flask placed in a bowl of cold water, 7.5ml of concentrated sulphuric acid is poured, followed by small portions, while continuously cooling and stirring, 3,5g of acetanilide powder is added. The resulting clear solution is cooled in a bowl of ice to 0 ^oC. At this time, the nitrating mixture is prepared: 1.25 ml of concentrated sulphuric acid and 2.0 ml of concentrated nitric acid (V). **The nitrating mixture should be cooled in ice.**

The nitrating mixture is added to the cold acetanilide solution drop by drop, stirring continuously and cooling. After the entire amount of the nitrating mixture has been dropped in, the contents of the flask are stirred, continuously cooling in ice, for 1 hour.

After this time, 50 g of crushed ice and 50 g of water are added to the flask.

The precipitated 4-nitroacetanilide, is filtered under reduced pressure. The precipitate is washed several times with water. The crude product is crystallised from ethanol.

Melting point, 214-216^oC