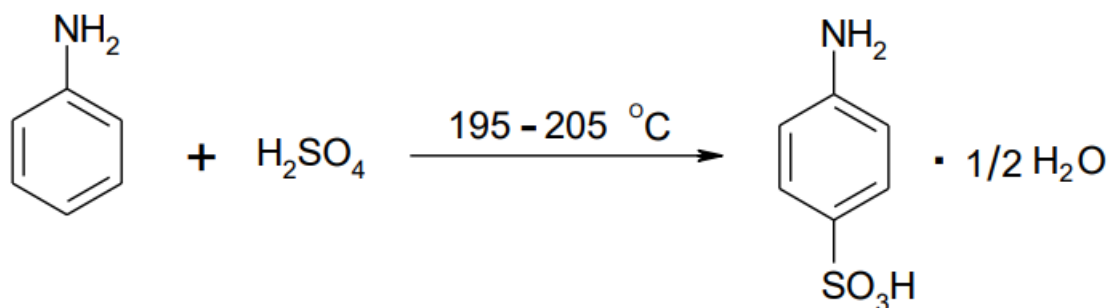


SULFANILIC ACID (4-aminobenzenesulfonic acid)



Reagents:

- aniline (15 ml)
- H_2SO_4 conc. (10 ml)
- activated carbon

Apparatus:

- two-necked round-bottomed flask (100 ml)
- round-bottomed flask (250 ml)
- reflux condenser
- dropping funnel 25ml
- 250°C thermometer
- Beaker (250 ml)
- crystalliser
- watch glass
- glass rod
- funnel

15 ml of aniline is placed in a two-necked round bottomed flask and 10 ml of concentrated H_2SO_4 is dropped in with stirring. After the entire amount of acid has been introduced, the dropping funnel is replaced by a thermometer and the contents of the flask are heated for 10 minutes at $195\text{--}205^\circ\text{C}$ (**note: the temperature range must be observed, as exceeding it causes charring of the product**). After cooling to approximately $40\text{--}50^\circ\text{C}$, the product is extracted with small portions of boiling water, using a total of 200 ml. The combined portions of the resulting aqueous extract are heated in a 250 ml round-bottomed flask until any precipitate dissolves, then a small amount of activated carbon is added and again heated for a few minutes at boiling point and filtered. The filtrate is cooled, after which the separated precipitate is drained off and air-dried.

Approximately 15 g (51%) of sulfanilic acid is obtained in the form of colourless, heavy crystals ($\text{H}_2\text{N-C}_6\text{H}_4\text{-SO}_3\text{H} \cdot \frac{1}{2} \text{H}_2\text{O}$), the product does not have a characteristic melting point, when heated above 200°C it darkens and chars (decomposition temperature approx. 288°C).