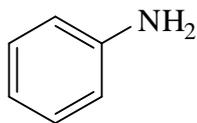
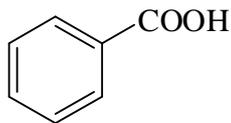


- Aniline, benzoic acid and benzamide are all insoluble in water, but soluble in ether. Explain how, by using simple laboratory reagents and equipment, each compound could be separated and recovered from a mixture of all three.

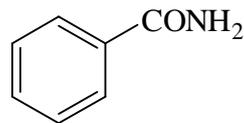
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5



aniline



benzoic acid



benzamide

All of the compounds are neutral and will dissolve in an organic solvent like ether.

Benzoic acid is a weak acid and will react with a strong base to form an anion which will dissolve in water.

Aniline is a weak base (whereas benzamide is a *very* weak base) and will be deprotonated by reaction with a strong acid to form a water soluble cation.

