

A solution of m-chloronailimne, m-chlorophenol and m-chlorobenzoic acid in ethyal acetate was extracted initially with a saturated solution of  $\text{NaHCO}_3$  to give fraction A. The left over organic phase was extracted with dilute  $\text{NaOH}$  solution tio give fraction B. The final organiic layer was labelled as fraction C. Fractions A,B and C, contain respectively :

A m-chlorobenzoic acid, m-chloroaniline and m-chlorophenol.

B m-chlorobenzoic acid, m-chlorophenol and m-chloroaniline.

C m-chlorophenol, m-chlorobenzoic acid and m-chloronailine.

D m-chloroaniline m-chlorobenzoic acid and m-chlorophenol.

## Explanation

m-chlorobenzoic acid dissolves in aq  $\text{NaHCO}_3$  while m-chlorophenol dissolves in aq  $\text{NaOH}$ .