Carboxylic acid

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| **Benzoic acid** | **Acetic acid** | **Name** |
| C7H6O2 | C2H4O2 | **Mol. Formula** |
| ØµÙØ±Ø© Ø°Ø§Øª ØµÙØ© |  | **Mol. Structure** |
| Solid | Liquid | **Physical state** |
| Soluble (Miscible) in NaOH and Acidize | Soluble (Miscible) in water and Acidize | **Solubility** |
| Weak | Strong | **Strong Acidize**  **1ml or 0.5 g of Acid+Na2CO3** |
| blue pH=4.6 | Yellow pH=3 | **Bromophenol blue** |
| ------------------ | The smell of acetic acid increases | **H2SO4 Conc.** |
| --------------------- | The smell of acetic acid increases | **Esterification**  **1-1ml of carboxylic acid +Ethanol + Conc .H2SO4 +∆**  **2-Add to backer contain 10 ml water +Na2CO3** |

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