

Qauitative analysis of organic compounds

▶ *single

▶ *mixture (impurities)

_as side products resulted during the
preparation of the organic compound
_ or may be decomposition products of the
original pure organic compound

Good separation and purification should precede qualitative analysis of organic compounds so that identification will be successful

The qualitative analysis of any organic compound should follow these steps:

1. Physical properties studying.

- ▶ State of the organic compound (solid, liquid, gas)
- ▶ Determination of the melting point or boiling point.
- ▶ Color, taste, and odor of the compound.
- ▶ Determination of the solubility group (solubility classification according to the general families).

2. Chemical properties studying.

- ▶ Effect of the compound or its solution on litmus paper.
- ▶ Determination of elements in the organic compound (nitrogen, sulfur, or halogens).
- ▶ Detection of the organic groups, i.e. group classification to get more specific families.
- ▶ Specific classification tests.
- ▶ Preparation of derivatives.