

Aldehydes and Ketones

Aldehydes and ketones are hydrocarbons with carbonyl groups. Aldehydes have the functional group attached on the end of the molecule, ketones have them inside the molecule.

General Formula:

Aldehyde

Ketone

Naming Rules

1. Aldehydes – change the ending of the alkane name to –al-

2. Ketones – change the ending of the alkane name to –one-

- you must indicate the position of the carbonyl if there is more than one possibility.

Properties of Aldehydes and Ketones

Since the C=O bond is strongly polar, both aldehydes and ketones have higher M.P. and B.P. than alkanes.

Because they can't H-bond, they have lower M.P and B.P. than alcohols.

Because of the C=O bond, both aldehydes and ketones can dissolve polar and non-polar substances, making them good solvents.

Examples of Aldehydes and Ketones

1. Methanal (formaldehyde) – used for preserving animal tissue.
2. Propanone (acetone) – used as a solvent.
3. Most steroid hormones are ketones (ex. Testosterone, cortisone)