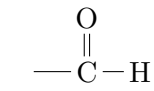
# Contents



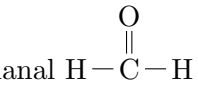
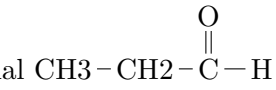
# 1 Homologous Series of Aldehydes

The functional group of the aldehyde is the *carbonyl group*. It is named according to the formula Alkan*al*. The functional group is always on the first carbon.



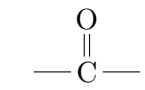
The carbonyl group.

## 1.1 Examples of Aldehydes

- Methanal 
- Ethanal 

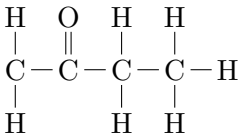
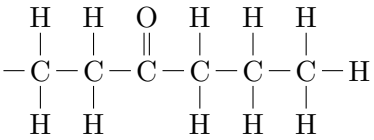
# 2 Homologous Series of Ketones

The ketones are very similar to the aldehydes. Its functional group is also the carbonyl group, but this time without the hydrogen. It can therefore not be located on the first or last carbon.



The ketone carbonyl group.

### 2.1 Examples of Ketones

- Butan-2-one 
- Hexan-3-one, 

## 3 Homologous Series of Ethers *Not on test*

Functional group:

—C—O

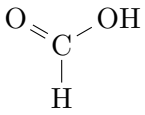
It breaks a carbon chain apart. They occur in carbohydrates.

### 3.1 Examples of Ethers

- Methoxyethane CH3 – O — CH2 – CH3

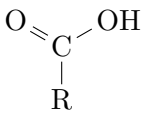
## 4 Homologous Series of Carboxylic Acids

The carboxylic acids, also known as the *organic acids*, have the functional group *COOH*.



This is an example of a carboxylic acid, methanoic acid (**Common name:** Formic acid)

The general formula of a carboxylic acid is as follows:



Where R is an alkyl.