**Functional groups**

|  |  |  |  |
| --- | --- | --- | --- |
| **Molecule** | **Molecular****formula** | **Semi-structural and skeletal diagram** | **Structural diagram** |
| pentane*alkane*  |  |  |  |
| cyclohexane |  |  |  |
| hex-2-ene*alkene*  |  |  |  |
| cyclohexene  |  |  |  |
| butan-1-ol *alcohol* |  |  |  |
| 2-chlorobutane *haloalkane* |  |  |  |
| butanoic acid*carboxylic acid* |  |  |  |
| butan-2-amine*amine* |  |  |  |
| butanamide*amide* |  |  |  |
| butanal*aldehyde* |  |  |  |
| butan-2-one*ketone* |  |  |  |
| methylpropanoate*ester*  |  |  |  |
| benzene*aromatic* |  |  |  |
| polyethene*polymer* |  |  |  |

**Solutions**

|  |  |  |  |
| --- | --- | --- | --- |
| **Molecule** | **Molecular****formula** | **Semi-structural and skeletal diagram** | **Structural diagram** |
| pentane*alkane*  | C5H12 | CH3CH2CH2CH2CH3 |  |
| cyclohexane | C6H12 |  |  |
| hex-2-ene*alkene*  | C6H12 | CH3CHCHCH2CH2CH2CH3 |  |
| cyclohexene  | C6H10 |  |  |
| butan-1-ol *alcohol* | C4H10O | CH3CH2CH2CH2OH |  |
| 2-chlorobutane *haloalkane* | C4H9Cl | CH3CH2CH2CH2Cl |  |
| butanoic acid*carboxylic acid* | C4H8O2 | CH3CH2CH2COOH |  |
| butan-2-amine*amine* | C4H11N | CH3CHNH2CH2CH3 |  |
| butanamide*amide* | C4H10ON | CH3CH2CH2CONH2 |  |
| butanal*aldehyde* | C4H8O | CH3CH2CH2CHO |  |
| butan-2-one*ketone* | C4H8O | CH3COCH2CH3 |  |
| methylpropanoate*ester*  | C4H8O2 | CH3OCOCH2CH3 |  |
| benzene*aromatic* | C6H6 |  |  |
| polyethene*polymer* | CnH2n | -CH2-  |  |