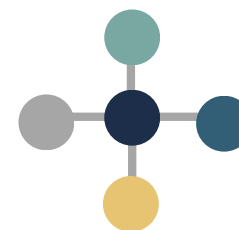


Chirality



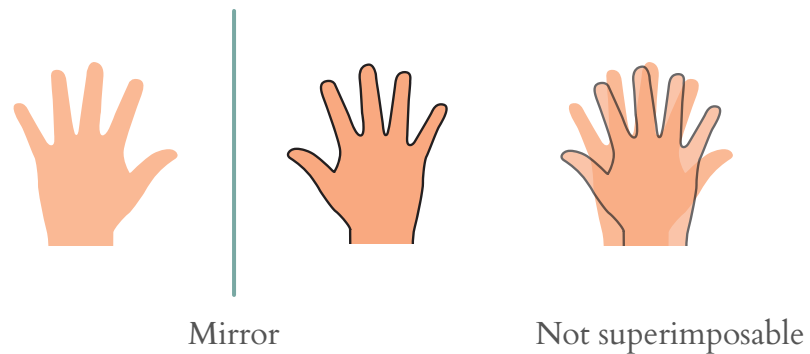
Chiral atom

- Atom bonded to four different atoms
- Also called stereocenter



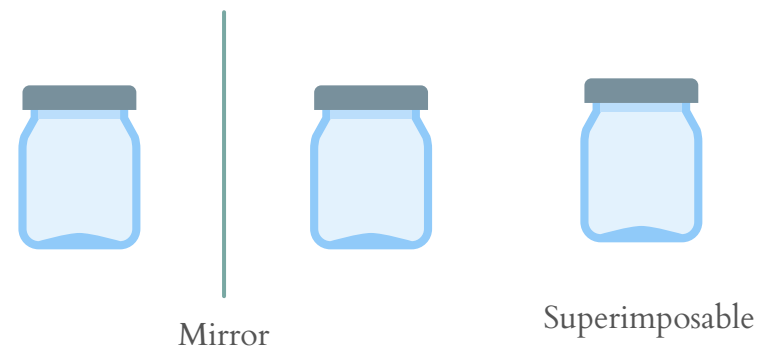
Chiral molecule

- Not superimposable on its mirror center



Achiral molecule

- Superimposable on its mirror center

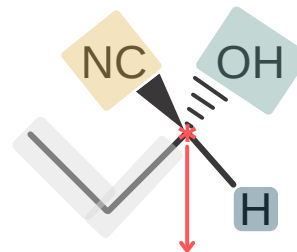
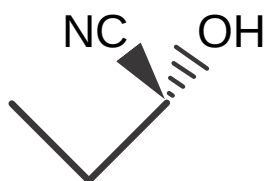


Chirality

Identify the stereocenter and if the molecule is chiral or achiral

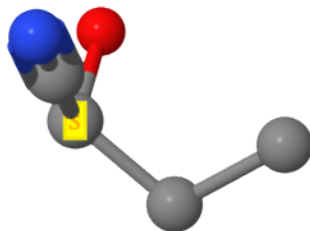
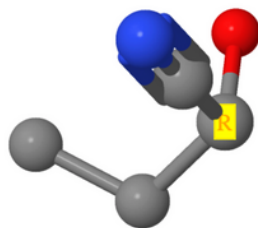
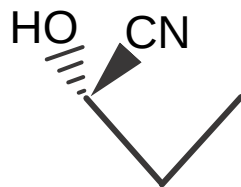
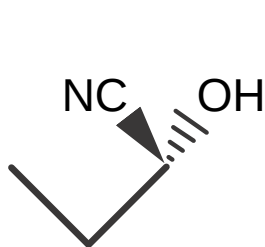
Example 1

Step 1 - Check if carbon is bounded to four different atoms

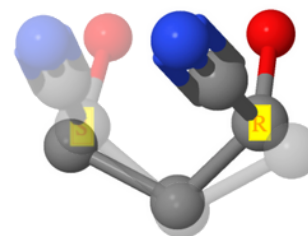


1 chiral center

Step 2 - Draw mirror image and check if they are superimposable



Mirror



Not superimposable
Chiral Molecule



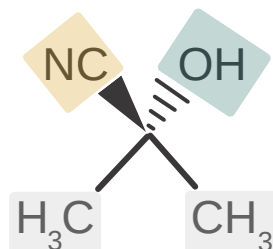
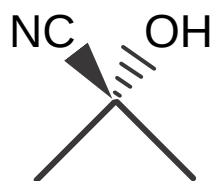
Use the QR codes to visualize the virtual 3D Models

Chirality

Identify the stereocenter and if the molecule is chiral or achiral

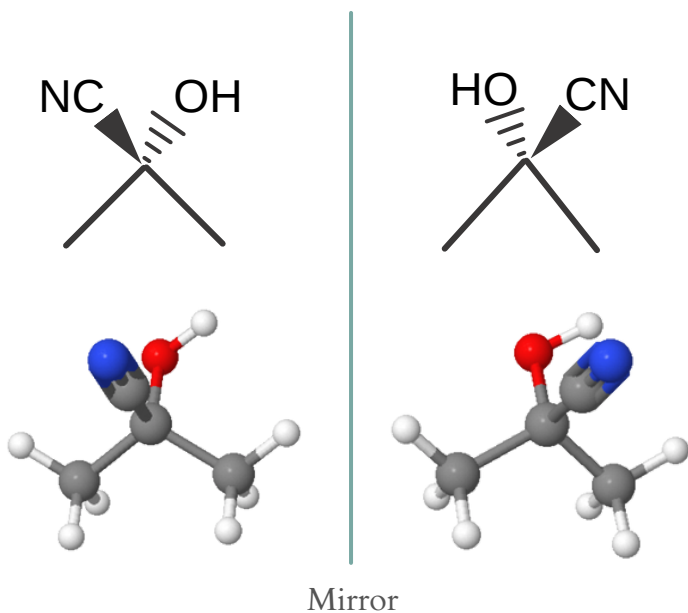
Example 2

Step 1 - Check if carbon is bounded to four different atoms

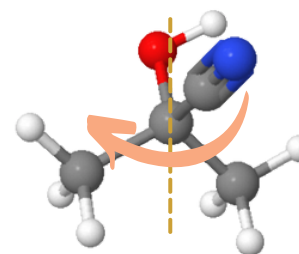


No chiral center

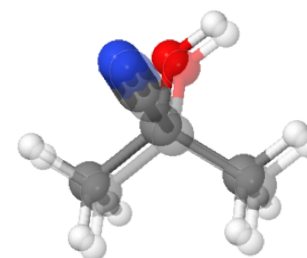
Step 2 - Draw mirror image and check if they are superimposable



Mirror



This molecule has a **mirror plane**



Achiral Molecule



Use the QR codes to visualize the virtual 3D Models

By **rotating** the mirror image is possible to conclude that the molecules are identical and superimposable.