Wedge and Dash Notation for 3D Chemical Structures

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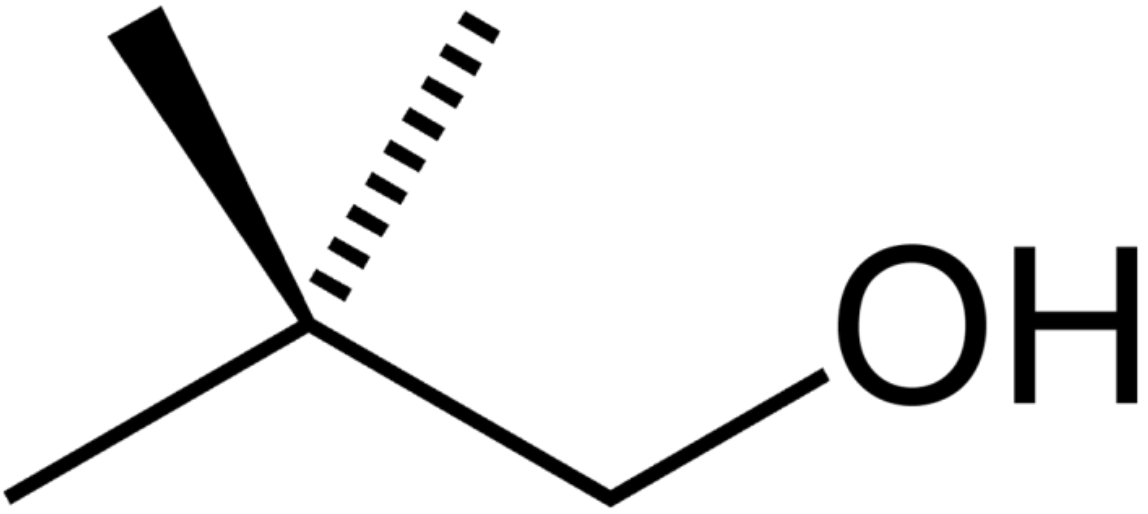
The **wedge and dash notation** is used to represent three-dimensional structures of molecules using a two-dimensional surface, like a sheet of paper or a computer screen. This type of structure is also called wedge-dash notation or wedges and dash notation. It is commonly used in organic chemistry, though you may see it any time a molecule structure is given.



Using wedge and dash notation, solid lines (sticks) represent chemical bonds in the plane of the surface. Black wedges represent chemical bonds coming toward you, while dashed lines are for bonds that extend back behind the surface.

Interpreting a Wedge and Dash Chemical Structure

There are three components to know to read wedge and dash notation:

- **solid lines** – Solid lines or "sticks" are used for the backbone of the chemical structure. Atoms and chemical bonds exist with the same plane. Think of them as lying in the paper or screen, lined up with one another.
- **wedges** – Solid triangular wedges represent chemical bonds and groups that are coming out of the page, toward you.
- **dashes** – Dashed triangular shapes represent chemical bonds and groups extending back behind the page.

Both wedges and dashes are wedge-shaped and denote bonds in a plane other than that of the page, but it's pretty easy to tell them apart.

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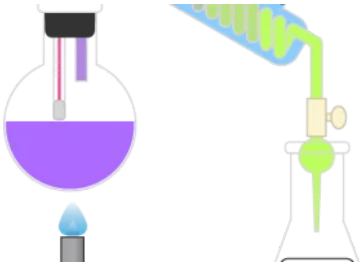

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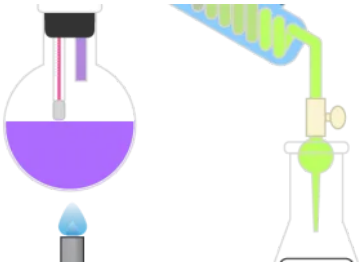

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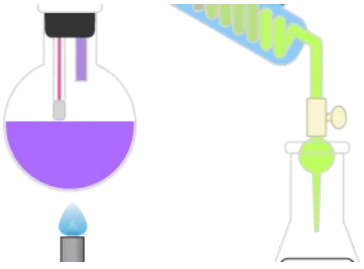

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