

IUPAC Rules for Naming Alkenes

I. Use IUPAC Rules for Naming Alkanes as starting point.

II. Unbranched and branched chain alkenes

- Identify the longest chain of carbon atoms *that contains the double bond*.
- Name the longest chain as an alkane, then convert the suffix *-ane* to *-ene*.
- Number the longest chain to give the carbon atoms of the double bond the smallest possible numbers.
- Indicate the position of the double bond in the longest chain by using a prefix (i.e., the *smaller number* of the two carbon atoms of the double bond).

Use a hyphen to connect the number to the name.

- Identify, name and number any substituents as is done for alkanes.
- Designate configuration (i.e., *cis-/trans-*, or (*E*)-/(*Z*)-), if necessary.

III. Cycloalkenes

- Number the carbon atoms of the double bond as “1” and “2” in the direction that gives the substituent encountered first the *smaller* number.
- Continue numbering around the ring.
- Identify, name and number any substituents as is done for (cyclo)alkanes.
- Designate configuration (i.e., *cis-/trans-*, or (*E*)-/(*Z*)-) only if the ring size is greater than or equal to eight carbon atoms.