

AL-Mustaqbal University

College of Science

Department of Biochemistry



جامعة المستقبل

كلية العلوم

قسم الكيمياء الحياتية

جامعة اهلية معترف بها من قبل وزارة التعليم العالي والبحث العلمي بموجب الامر الاداري ذي العدد (ج هـ / 3989) بتاريخ (2010/8/31) وقرار مجلس الوزراء المؤقر المرقم 427 لسنة 2009 .

alkene structure of *alkene nomenclature*

Usually alkenes end in the suffix 'ene.' This indicates that one double bond is present in the carbon chain. However, for two double bonds the name will end in 'diene,' for three the suffix with be ~triene,' and so forth for additional double bonds. The prefix has to do with how many carbons are in the main chain.

IUPAC Rules for Alkene Nomenclature

- The ene suffix (ending) indicates an alkene or cycloalkene.
- The longest chain chosen for the root name must include both carbon atoms of the double bond.
- The root chain must be numbered from the end nearest a double bond carbon atom

IUPAC Rules for Alkene Nomenclature

1. The **ene** suffix (ending) indicates an alkene or cycloalkene.
2. The longest chain chosen for the root name must include both carbon atoms of the double bond.
3. The root chain must be numbered from the end nearest a double bond carbon atom. If the double bond is in the center of the chain, the nearest substituent rule is used to determine the end where numbering starts.
4. The smaller of the two numbers designating the carbon atoms of the double bond is used as the double bond locator.

نسخة منه الى

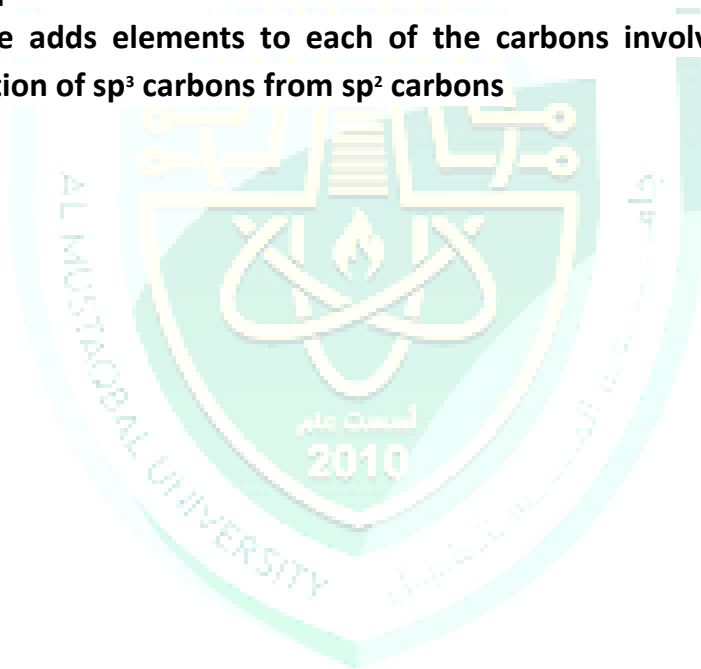
5. If more than one double bond is present the compound is named as a diene, triene or equivalent prefix indicating the number of double bonds, and each double bond is assigned a locator number.

6. Substituent groups containing double bonds are:

- $\text{H}_2\text{C}=\text{CH}-$ Vinyl group
- $\text{H}_2\text{C}=\text{CH}-\text{CH}_2-$ Allyl group

CHEMICAL Reactions of Alkenes

Alkenes are primarily prepared by elimination reactions of molecules that contain good leaving groups attached to sp^3 carbons. Examples of such reactions are dehydrohalogenations with strong base, and acid-catalyzed dehydrations of alcohols. The opposite of an elimination is an addition reaction. **In an addition reaction an alkene adds elements to each of the carbons involved in the π -bond, resulting in formation of sp^3 carbons from sp^2 carbons**



نسخة منه الى