# الفصل السادس

# ( مختارات من التحضير العضوي )

في هذا الفصل سوف نستعرض خطوات التحضير العضوي لطوائف عضوية مختلفة والتي تمثل اساسيات التحضير العضوي والتي تم توضيحها في الفصول السابقة .

عندما يراد من الكيميائي تحضير اي مركب عضوي عليه ان يخطط للتحضير كالاتي :

* نستعمل المواد الاولية البسيطة والمتوفرة

* يجب ان يتضمن التحضير اقل عدد من الخطوات

* تجنب التفاعلات التي تؤدي الى تكوين خليط من النواتج والتي يضطر الكيميائي الى فصل هذه الخلائط .

* الحصول على منتوج جيد .

وسيتم في هذا الفصل تحضير عدد من المركبات العضوية بطريقة( Disconnection – Synthesis ) حيث يتم في هذه الطريقة تحطيم الجزيئة المراد تحضيرها للوصول الى المواد الاولية المطلوبة ثم عملية التحضير لهذه الجزيئة من المواد الاولية التي تم التوصل اليها في الخطوة الاولى .

**السنثون : Synthon**

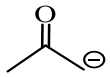
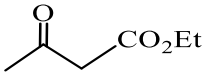
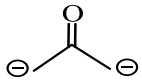
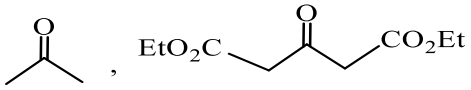
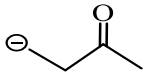
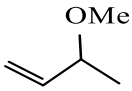
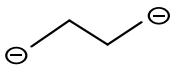
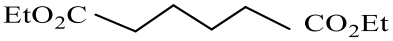
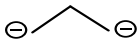
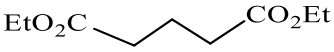
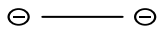
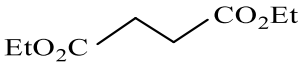
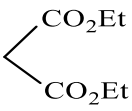
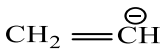
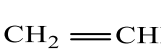
هو الايون الناتج من عملية التحطيم ( .dis ) للجزيئة المطلوب تحضيرها وهذا السنثون قد يكون ايون سالب ( .Nuc ) او ايون موجب ( .Elec ) .

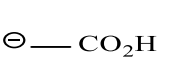
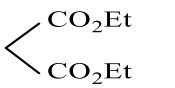
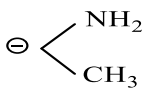
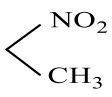
**المكافئ التحضيري : Synthetic Equivalent**

هي الجزيئة او المادة الاولية التي تستخدم للحصول على السنثونات في عملية التحضير .

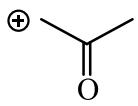
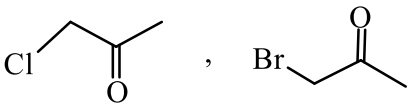
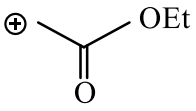
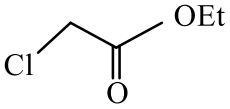
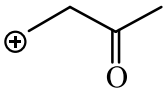
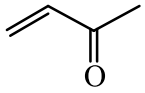
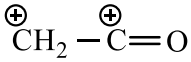
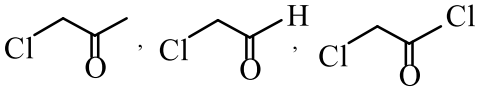
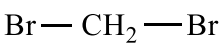
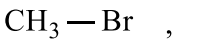
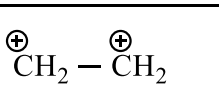
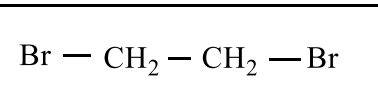
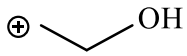
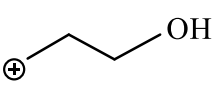
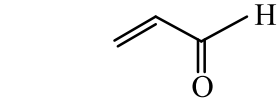
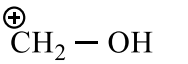
والجداول التالية توضح ذلك :

( a ) Nucleophilic synthons and synthetic equivalents :

| Synthon | Synthetic Equivalent |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| | $CH_3MgBr$ , $CH_3Li$ , |
| |  |
|  |  |

| | |
|---|---|
|  |  , $(CH_3CO)_2O$ |
|  |  |
|  | $CHCl_3$ |

( b ) Electrophilic synthons and synthetic equivalents :

| Synthon | Synthetic Equivalent |
|---|---|
|  |  |
|  |  |
|  |  |
|  |  |
| |  |
| |  |
|  |  |
|  | |
|  |  |
|  | |
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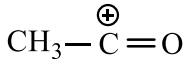
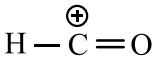
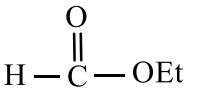
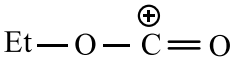
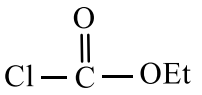
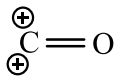
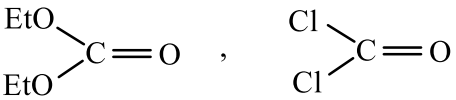
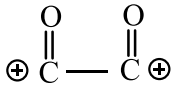
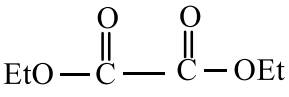
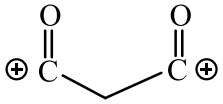
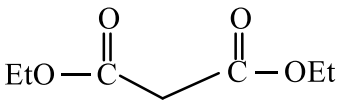
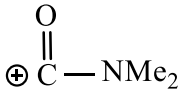
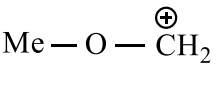
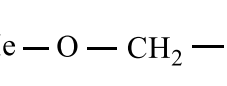
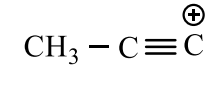
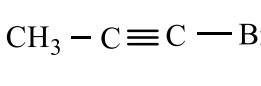
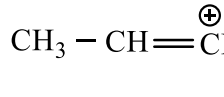
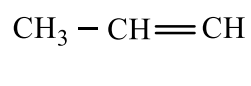
| Synthon | Synthetic Equivalent |
|---|---|
|  | $CH_3COCl$ , $CH_3CO_2Et$ , $(CH_3CO)_2O$ |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  | |
|  |  |
|  |  |
|  |  |
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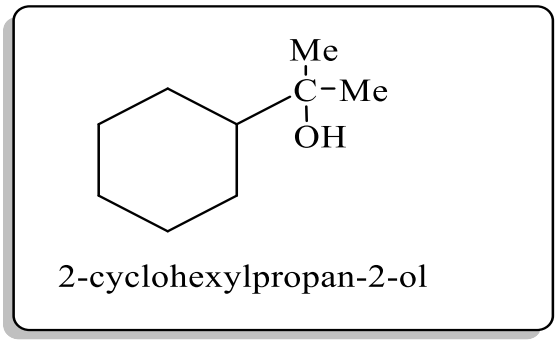
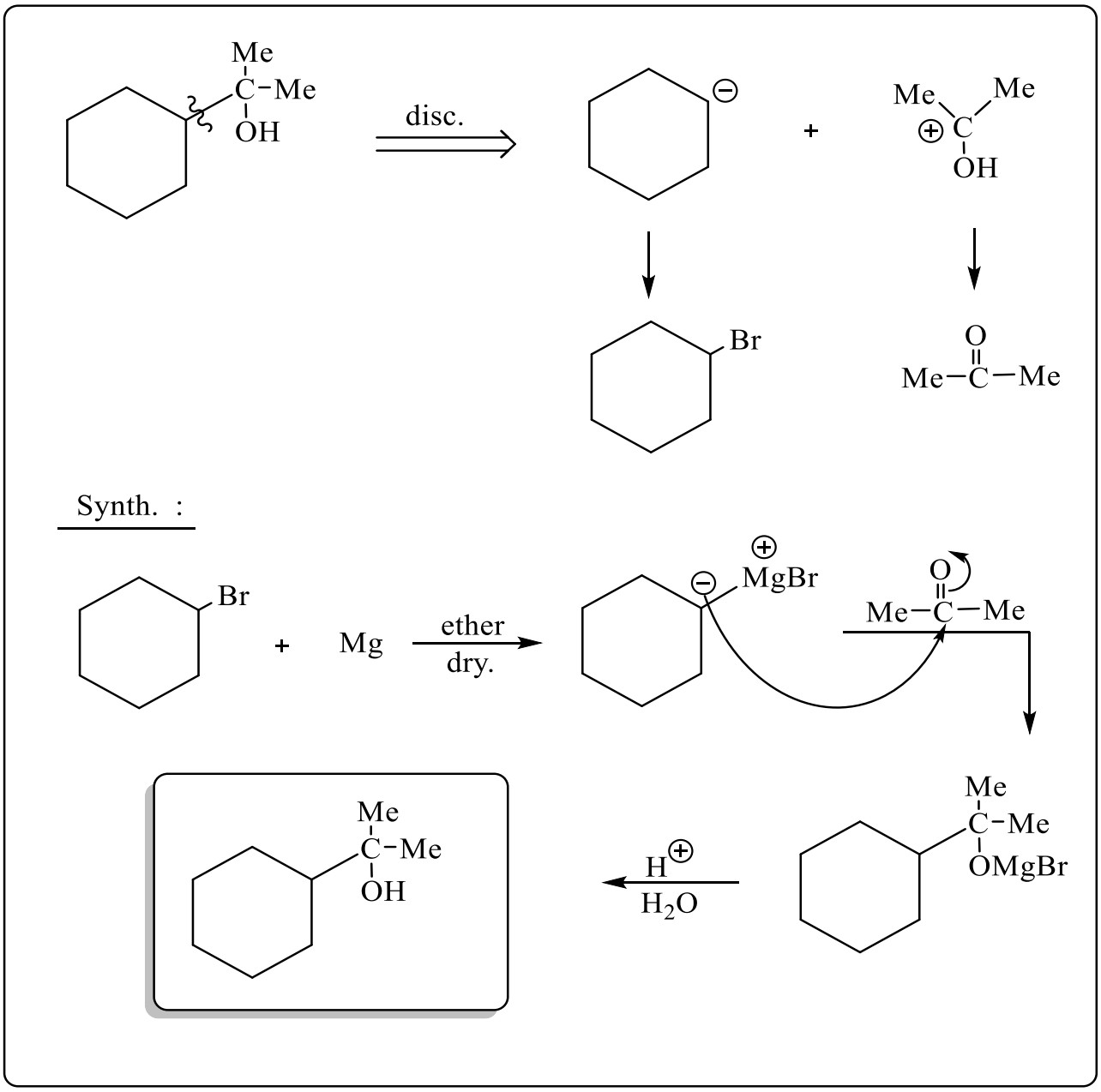
## 1 – الكحولات :

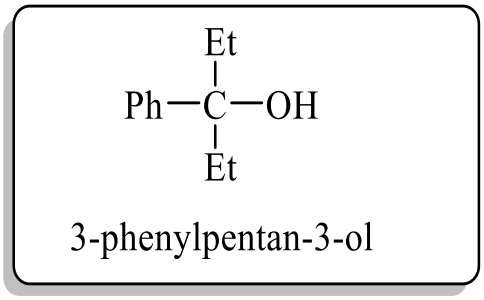
كيف يمكنك تحضير المركب :

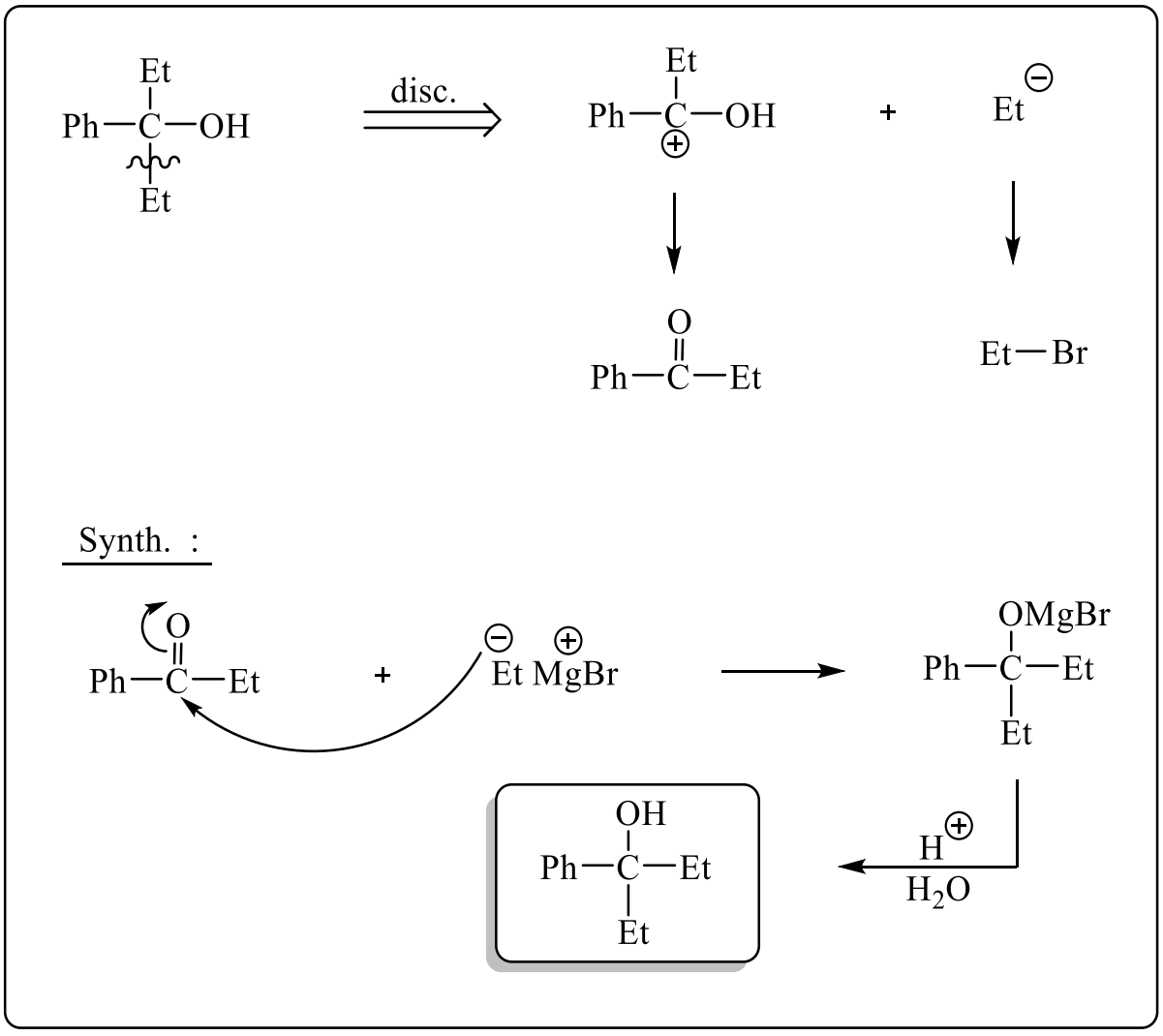



2-cyclohexylpropan-2-ol

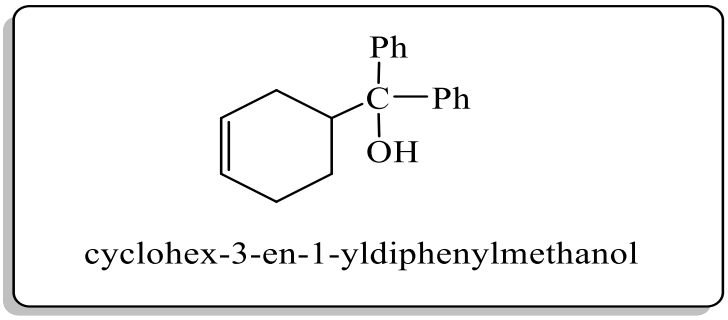


حضر المركب :


Et
Ph—C—OH
Et
3-phenylpentan-3-ol


Et
Ph—C—OH
Et
disc.
Et
Ph—C—OH
+
Et
O
Ph—C—Et
Et—Br
Synth. :
O
Ph—C—Et
+
Et MgBr
OMgBr
Ph—C—Et
Et
OH
Ph—C—Et
Et
H
H2O

كيف يمكنك تحضير المركب :




cyclohex-3-en-1-yldiphenylmethanol