

Universidad Nacional Autónoma de México

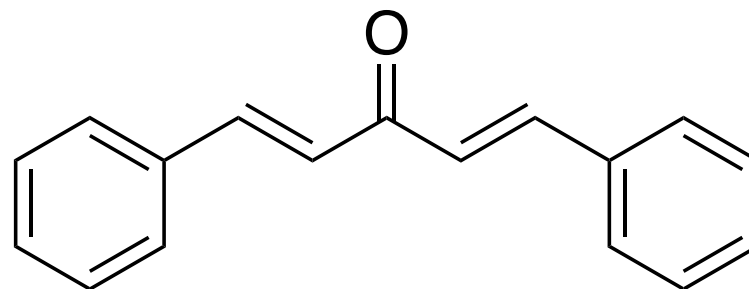
Química Orgánica III (1506)

Laboratorio

Semestre 2026 - 2



M. en C. Arturo García Zavala



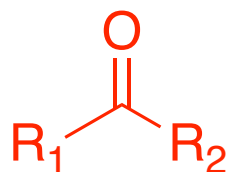
Práctica 7 (Parte 1)

Carbonilos III: Condensación aldólica

22/04/2026

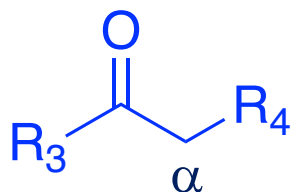
Condensación aldólica

no enolizable



electrófilo

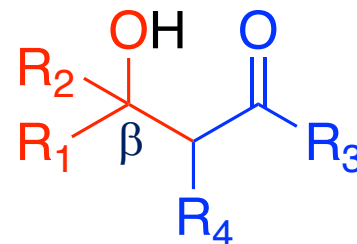
enolizable



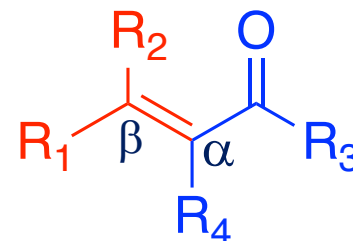
nucleófilo

ácido o base

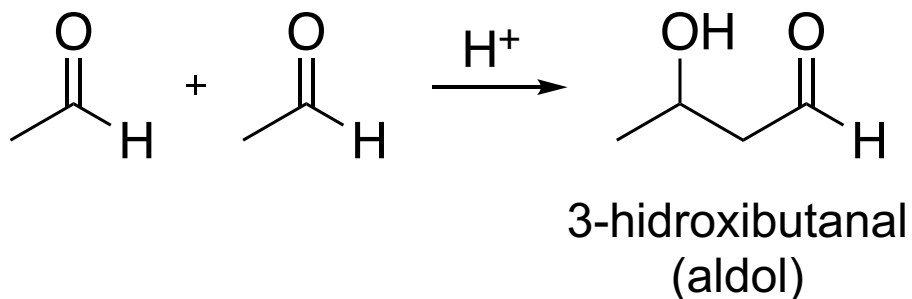
compuesto
 β -hidroxicarbonílico



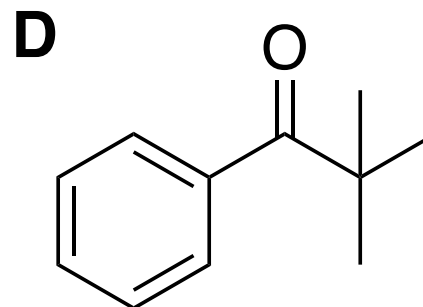
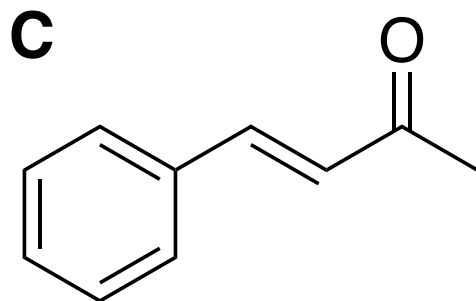
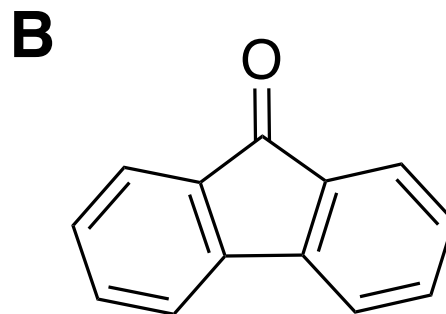
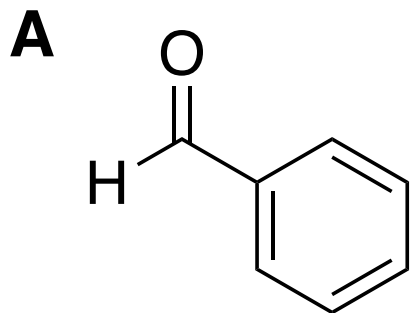
$-\text{H}_2\text{O}$



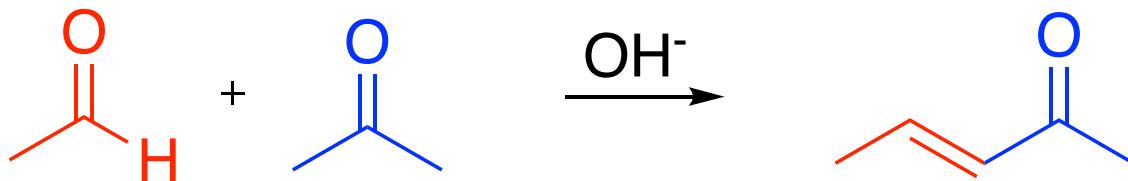
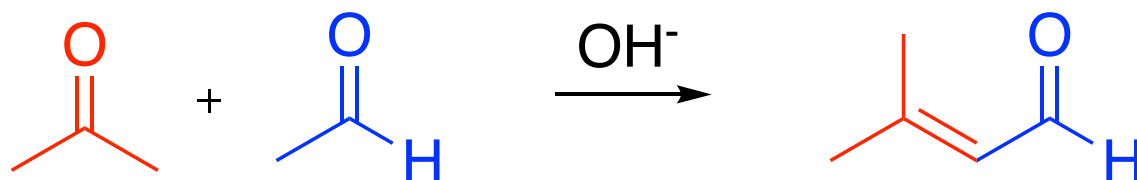
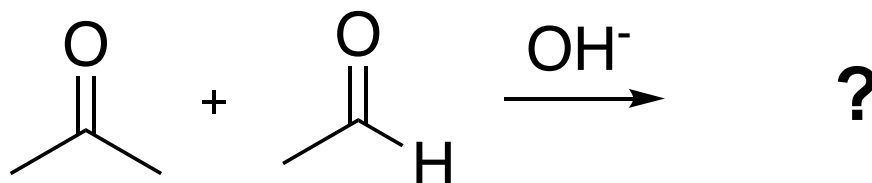
compuesto carbonílico
 α,β -insaturado



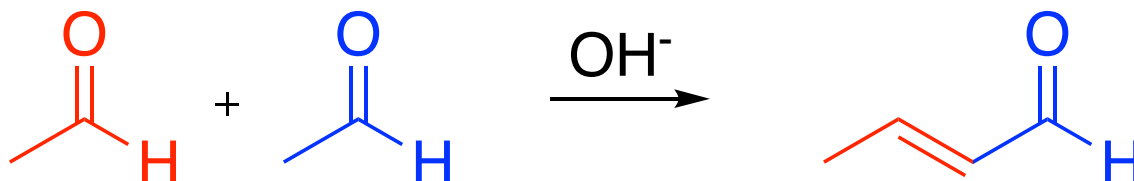
¿Cuál de los siguientes compuestos es enolizable?



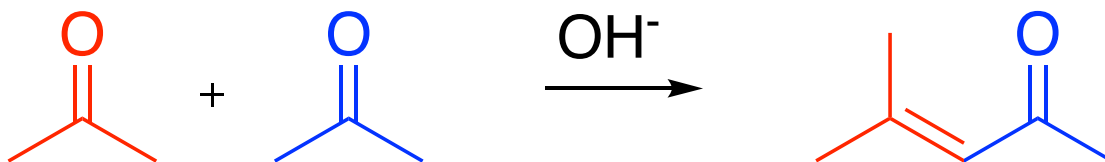
Condensación aldólica cruzada electrófilo nucleófilo



Productos de condensación cruzada



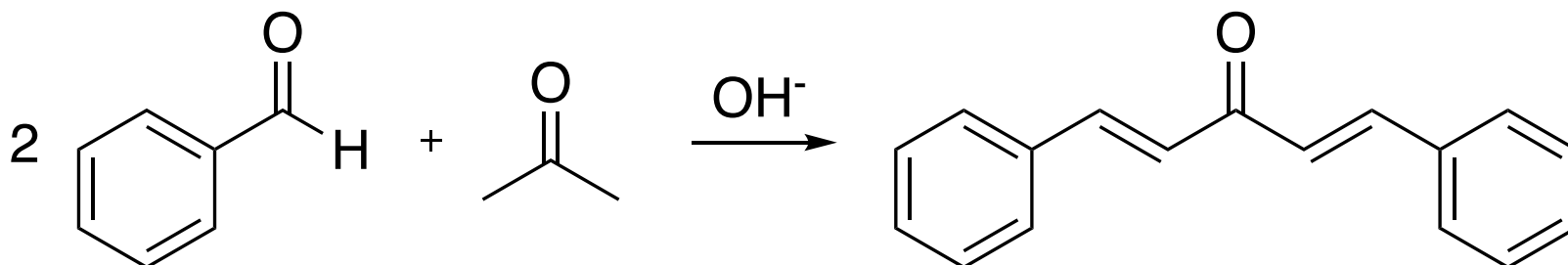
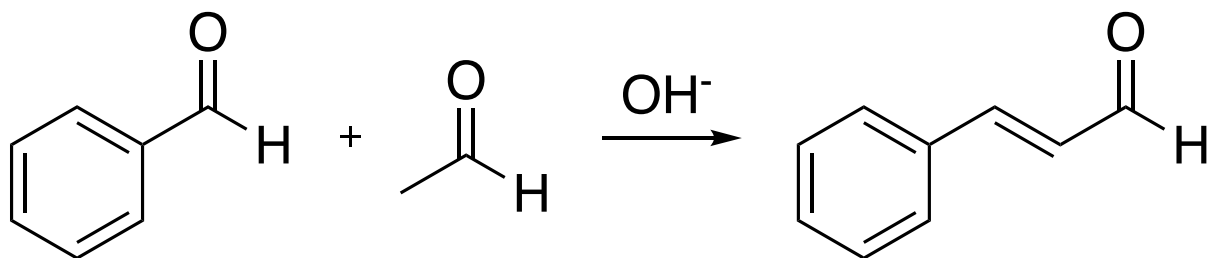
Productos de autocondensación



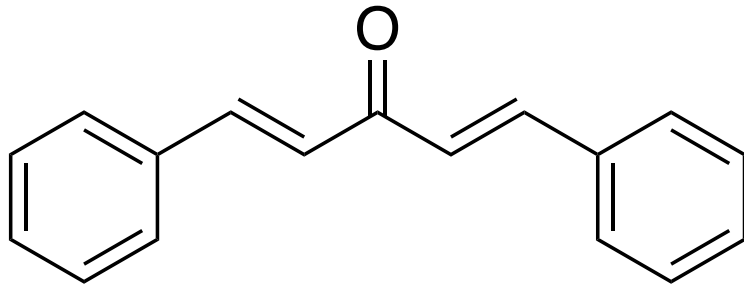
Variante de condensación aldólica cruzada

Reacción de Claisen-Schmidt

Uno de los compuestos carbonílicos no tiene hidrógenos alfa



Compuestos producto de condensación aldólica



Dibenzalacetona (DBA)



Review > [Int J Cosmet Sci.](#) 2025 Jul 10. doi: 10.1111/ics.70002. Online ahead of print.

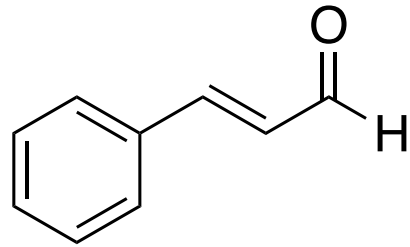
Photoprotective efficacy of dibenzalacetone in sunscreen formulations: Physicochemical properties, synthesis, characterization, potential applications in sunscreen and biological activities

[Khaled E Abuelella](#)¹, [Saadalla Nady Gaid](#)², [Mahmoud Alaaeldin Khattab](#)², [Kareem O Rashwan](#)¹, [Nermin M Sheta](#)¹

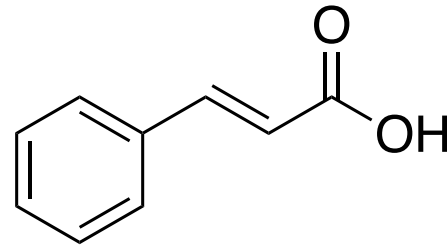
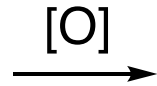
Affiliations + expand

PMID: 40637076 DOI: [10.1111/ics.70002](#)

Compuestos producto de condensación aldólica



cinamaldehído



ácido cinámico



¿Quién me jaló
mi cabeio?

> [Sci Rep.](#) 2024 Feb 27;14(1):4709. doi: 10.1038/s41598-024-55377-y.

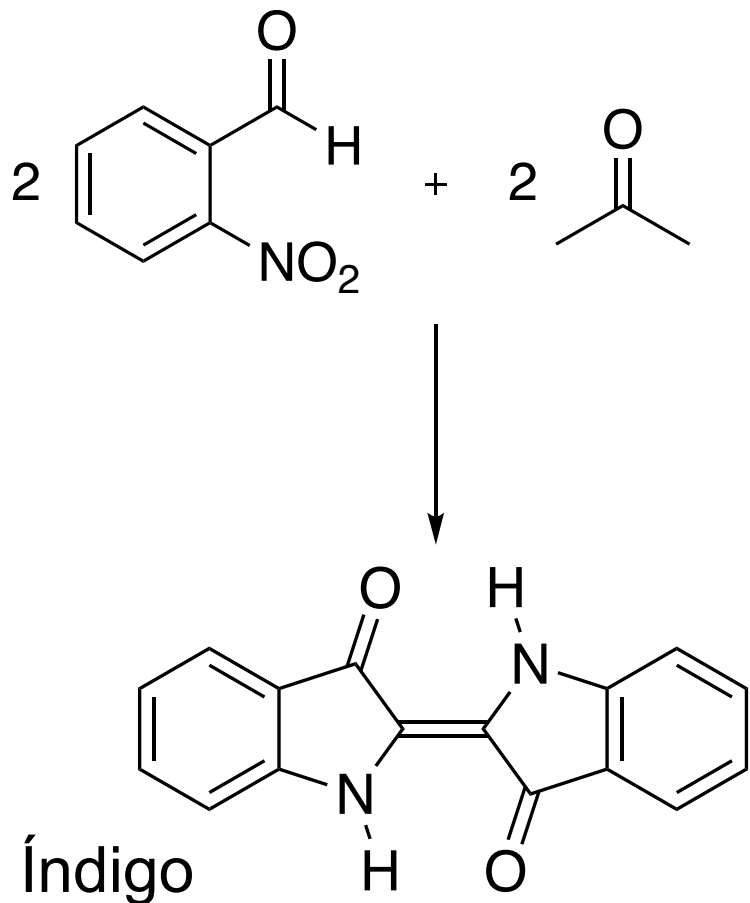
Cinnamic acid promotes elongation of hair peg-like sprouting in hair follicle organoids via oxytocin receptor activation

Tatsuto Kageyama ^{1 2 3}, Jieun Seo ^{2 3}, Lei Yan ^{1 2 3}, Junji Fukuda ^{4 5 6}

Affiliations + expand

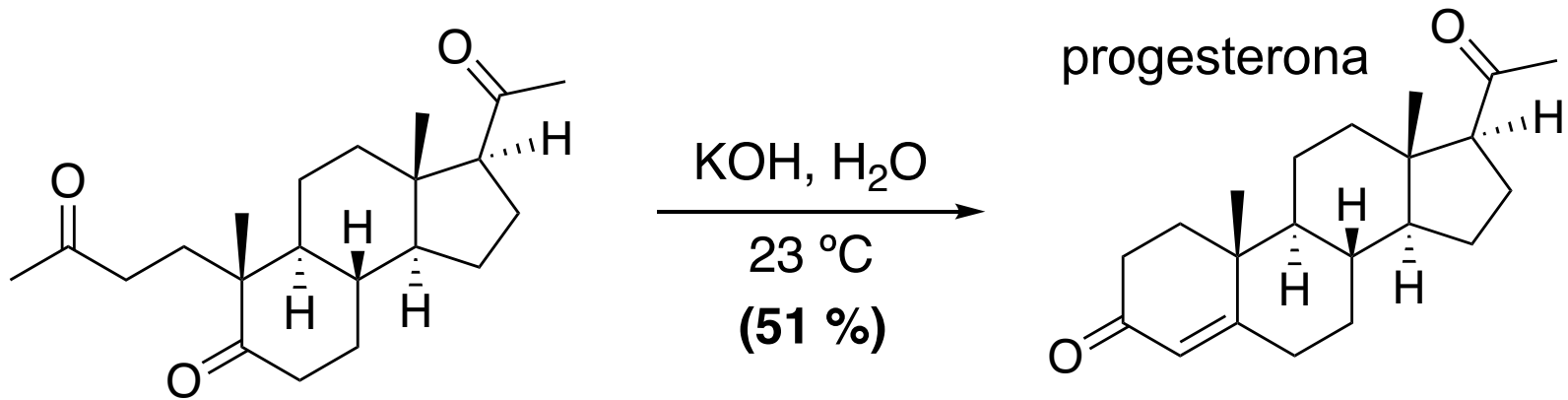
PMID: 38409197 PMCID: [PMC10897452](#) DOI: [10.1038/s41598-024-55377-y](#)

Compuestos producto de condensación aldólica



Berichte der Dtsch. Chem. Gesellschaft **1882**, 15 (2), 2856–2864.

Compuestos producto de condensación aldólica

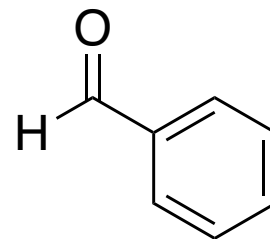
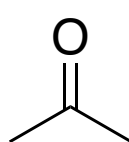


J. Am. Chem. Soc. **1971**, 93 (17), 4332–4334.



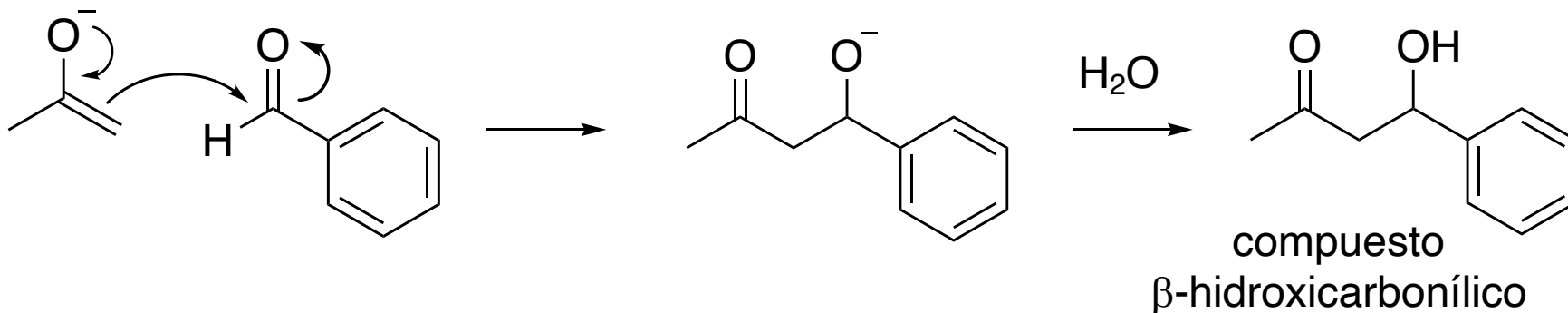
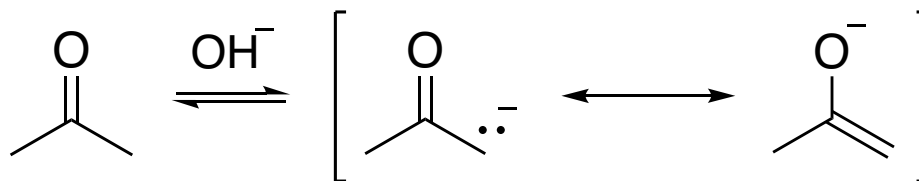
Mecanismo

enolizable

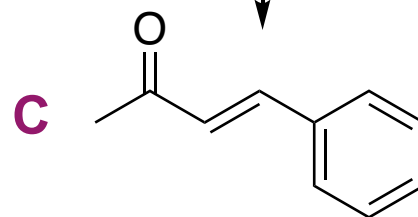
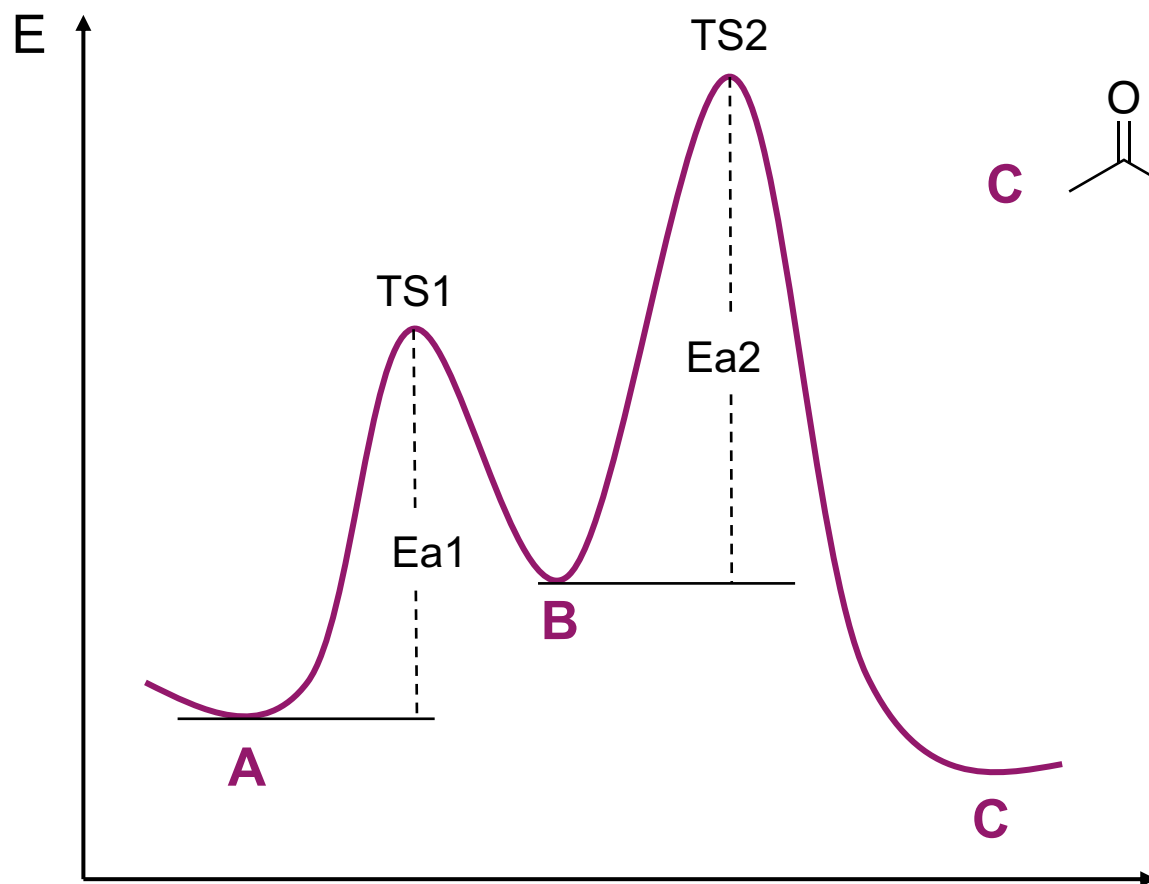
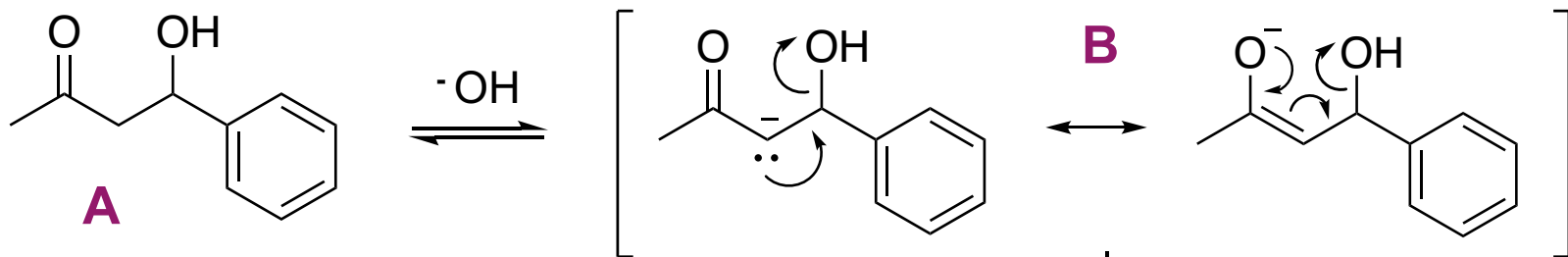


no enolizable

Formación del enolato

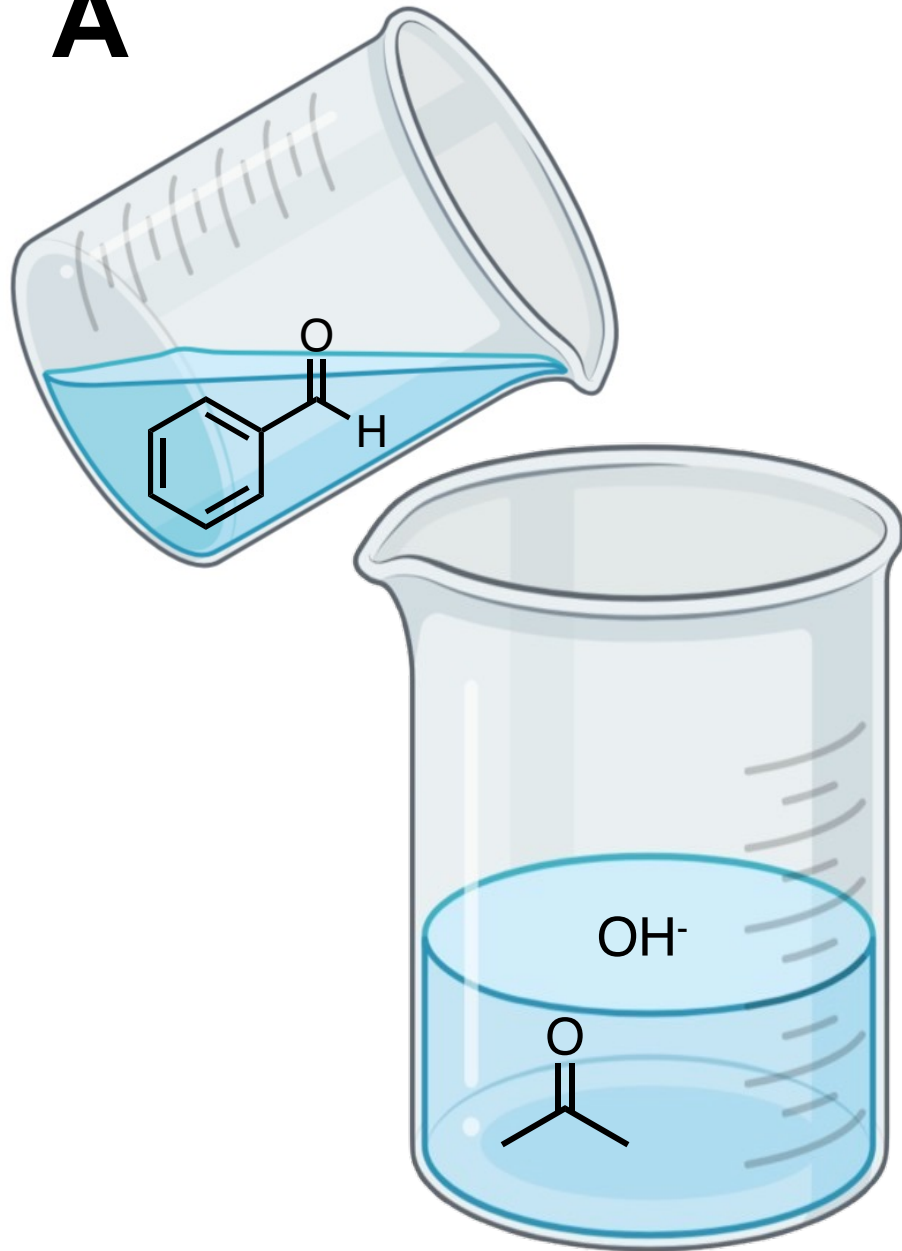
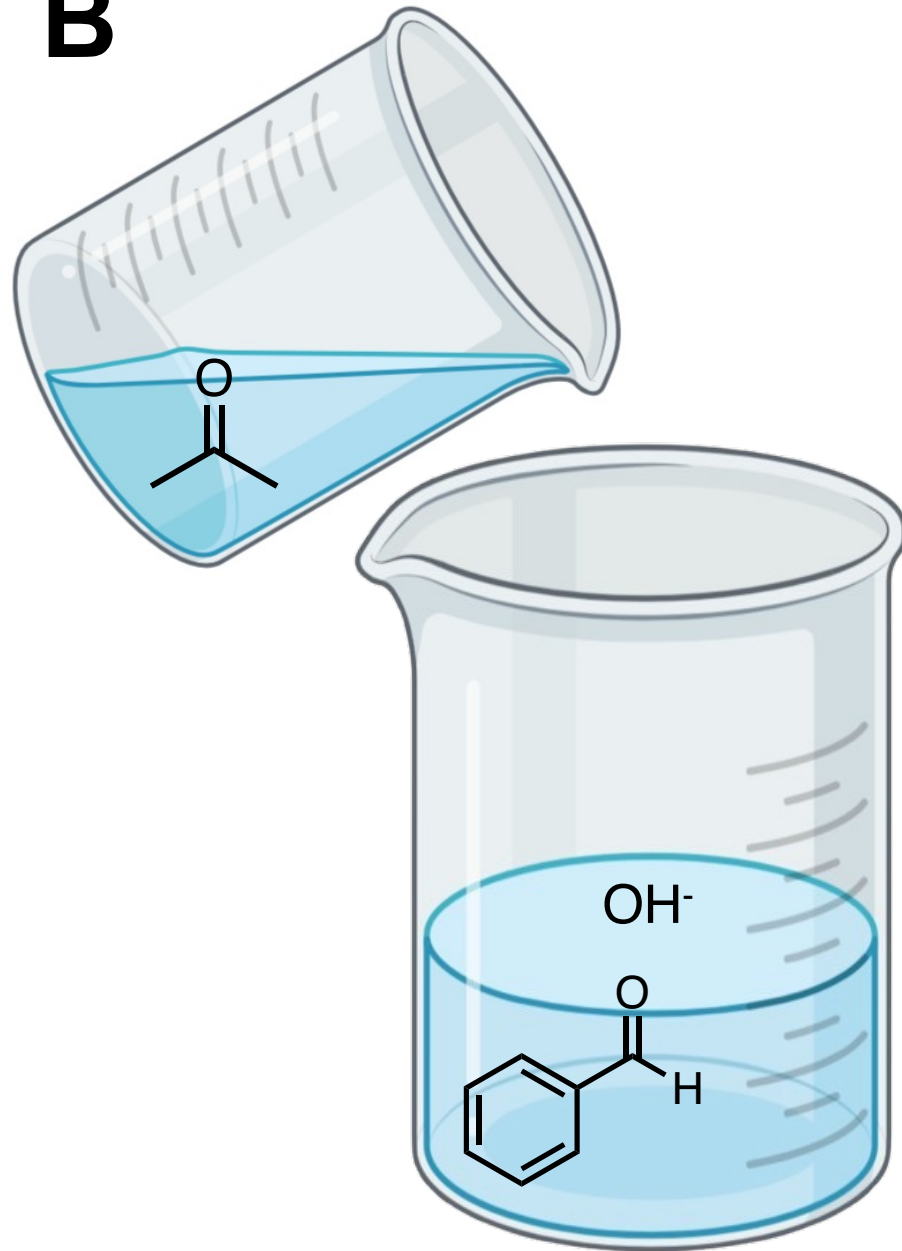


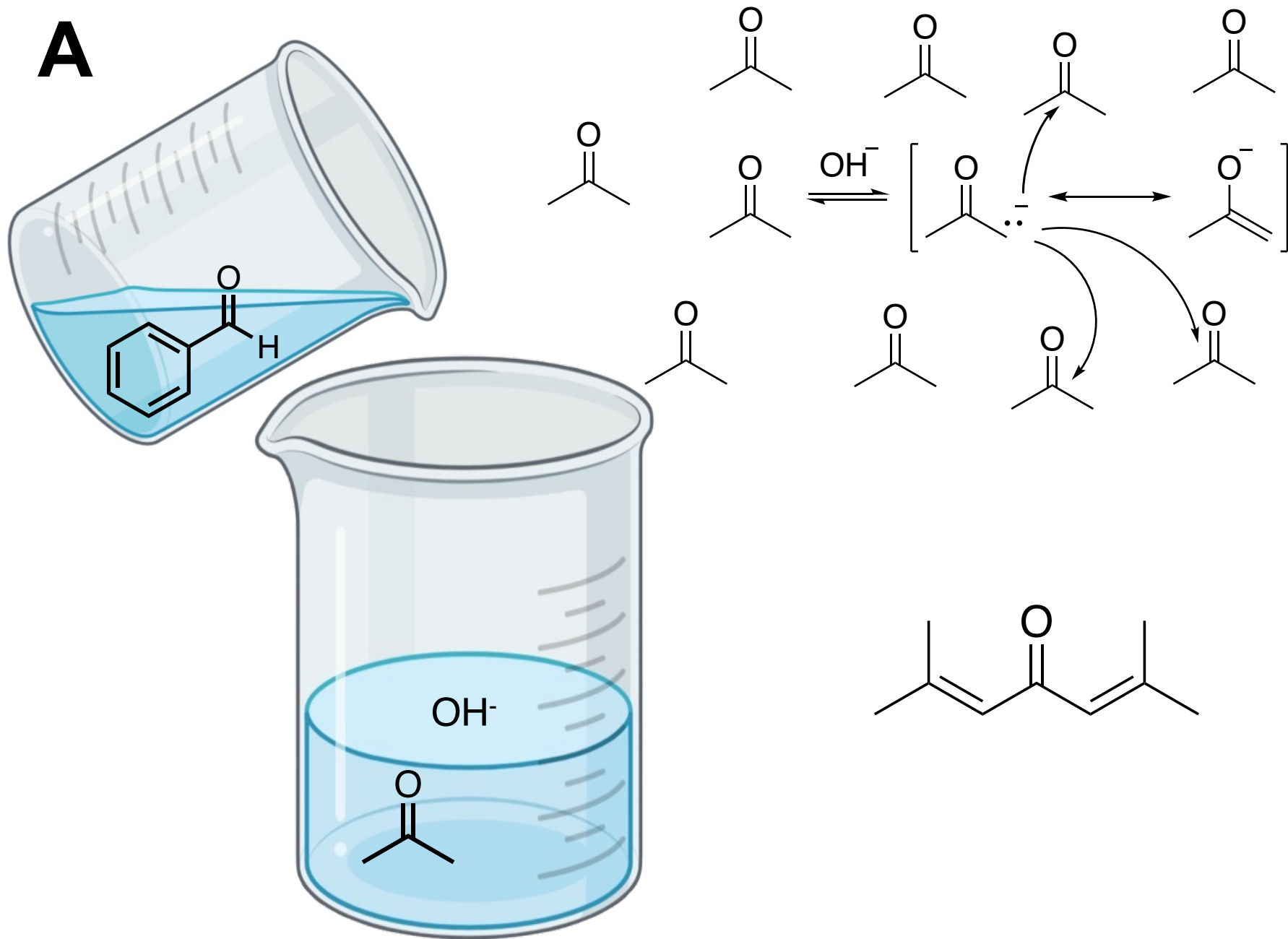
Paso de deshidratación (E1cB)

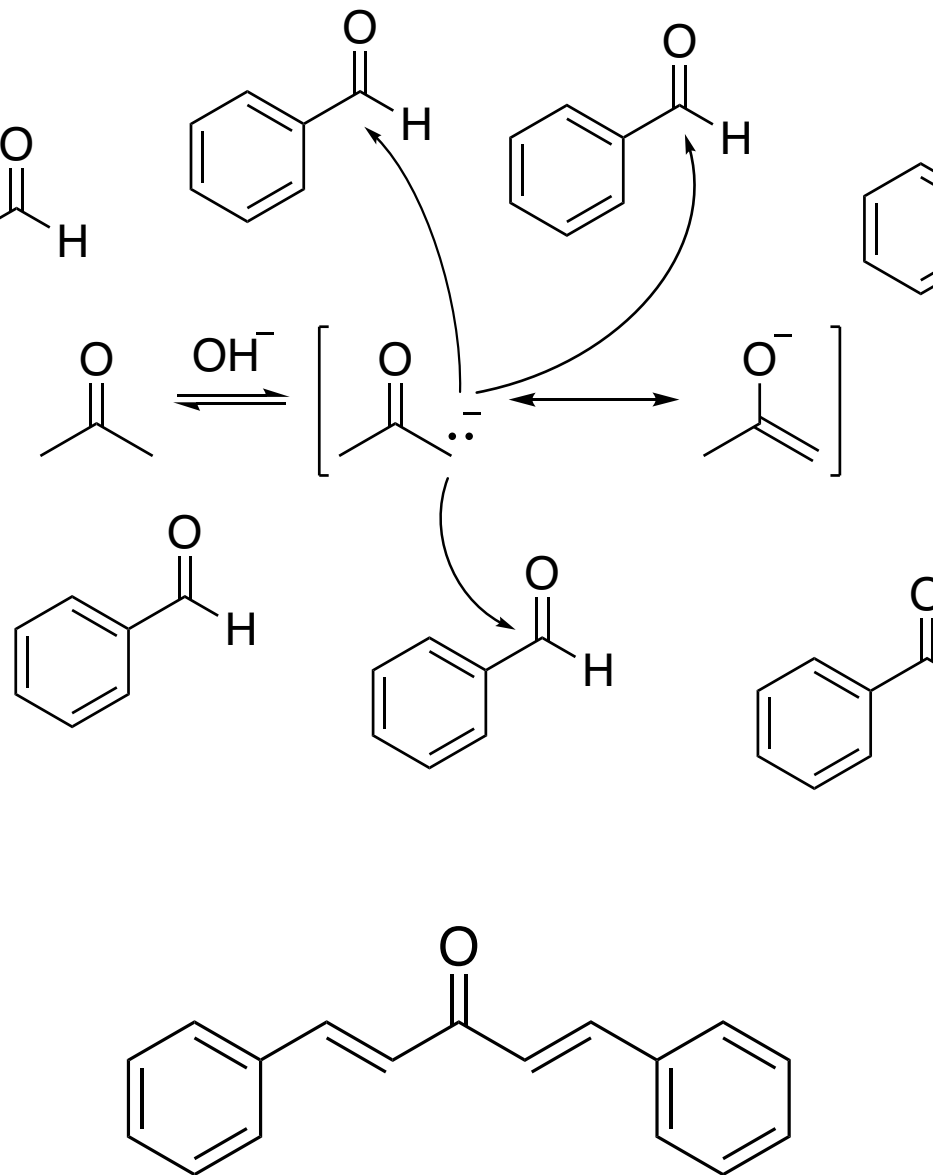
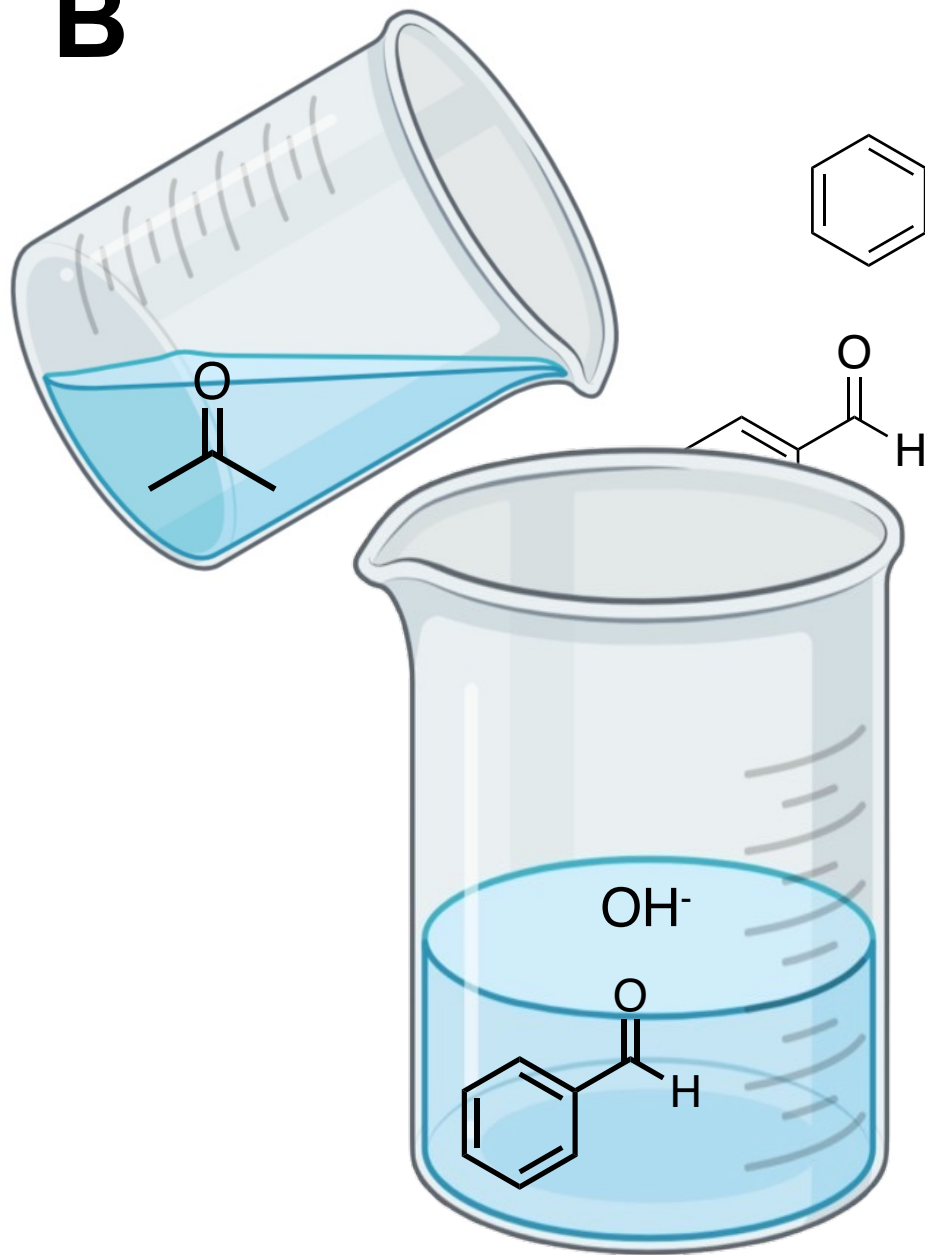


compuesto
carbonílico
 α,β -insaturado

Elimination
1(unimolecular)
Conjugate
Base

A**B**

A

B

Reacción colateral: Reacción de Canizzaro

