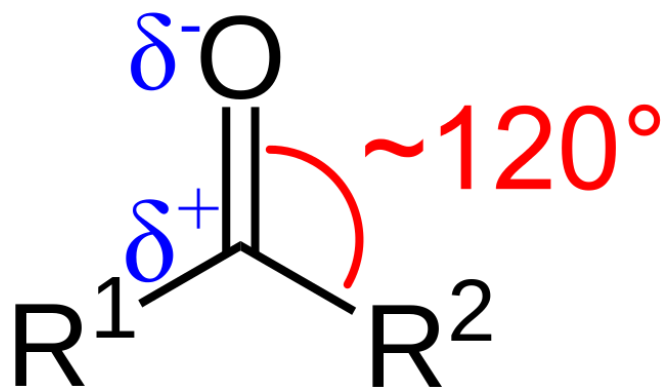




República Bolivariana de Venezuela
Ministerio del Poder Popular para la Educación
U.E. Colegio "Santo Tomás de Villanueva"
Departamento de Ciencias
Cátedra: Química Orgánica
5° Año

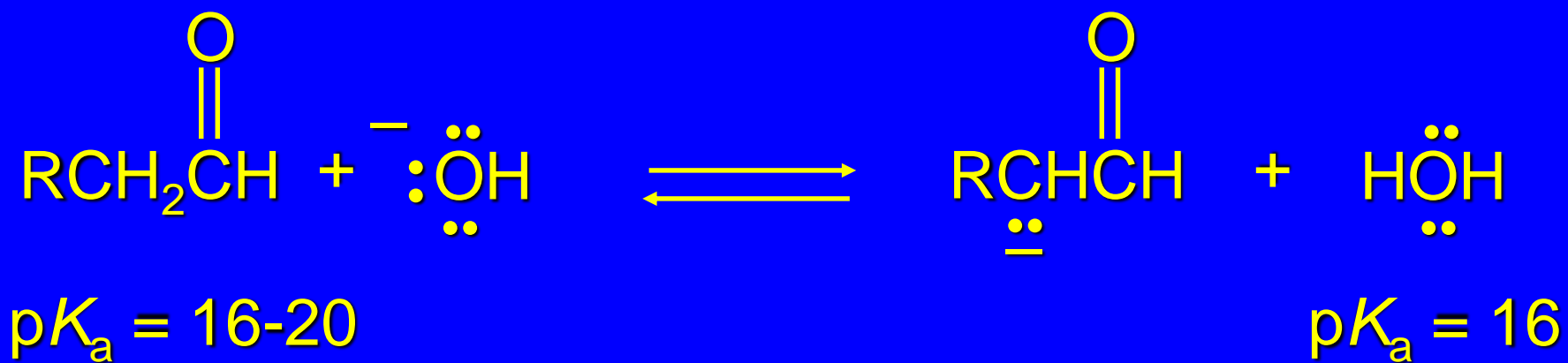


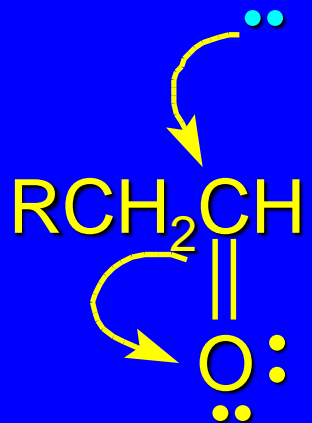
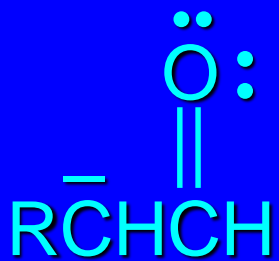
Tema XIV(Parte III): Reacciones del Grupo Carbonilo I (Aldehídos y Cetonas) Condensaciones

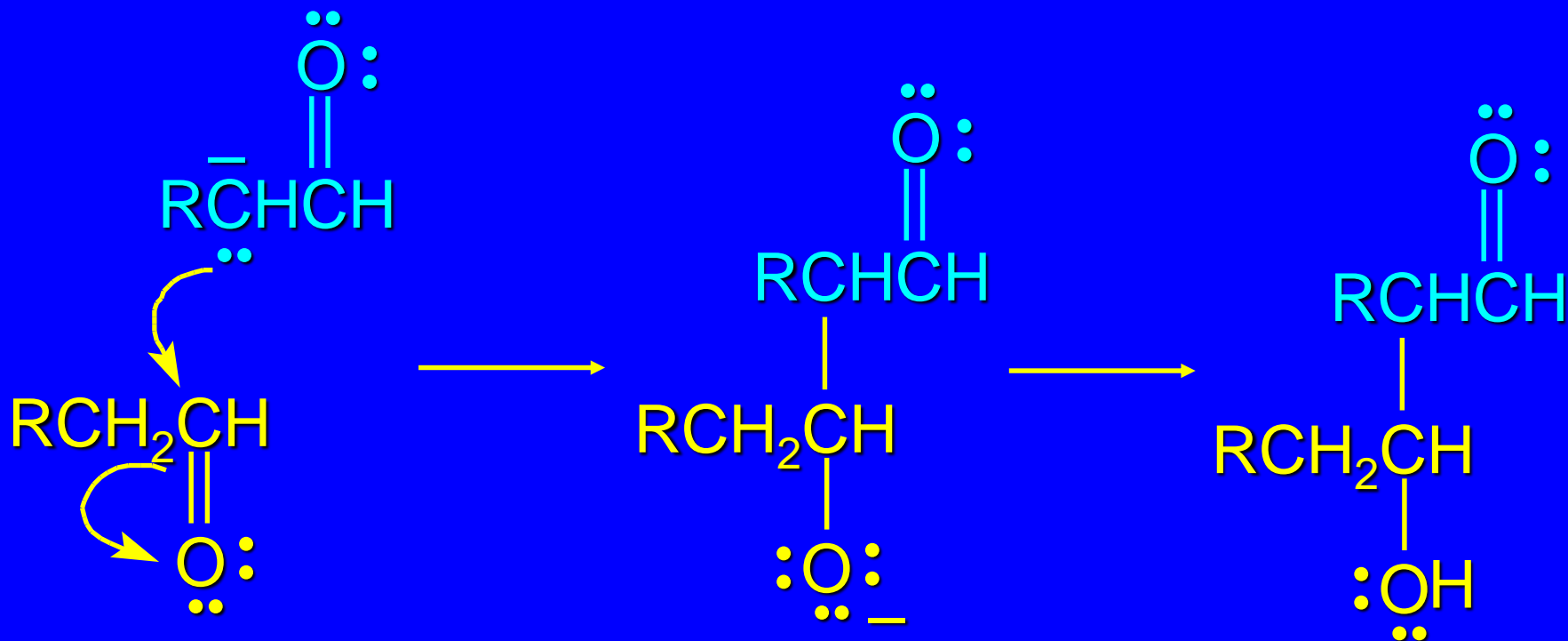


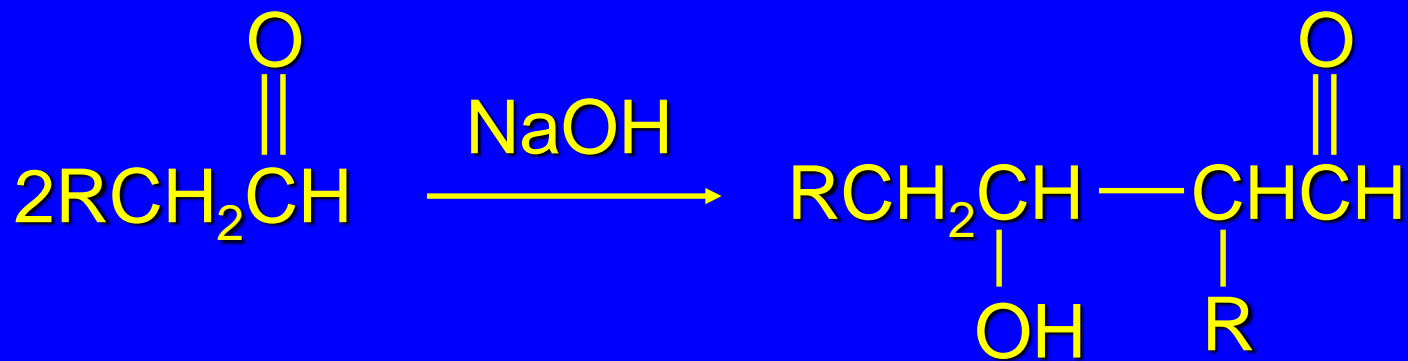
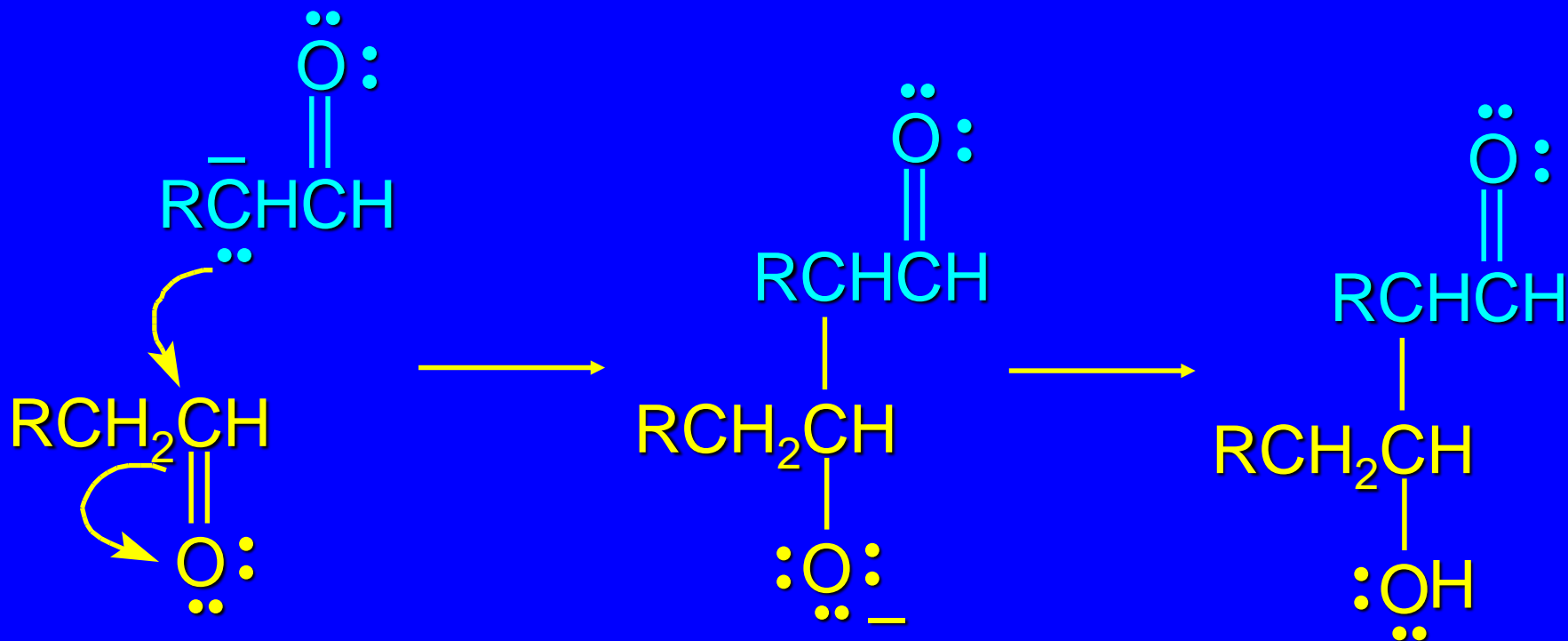
Prof. Luis E. Aguilar R.

CONDENSACION ALDOLICA

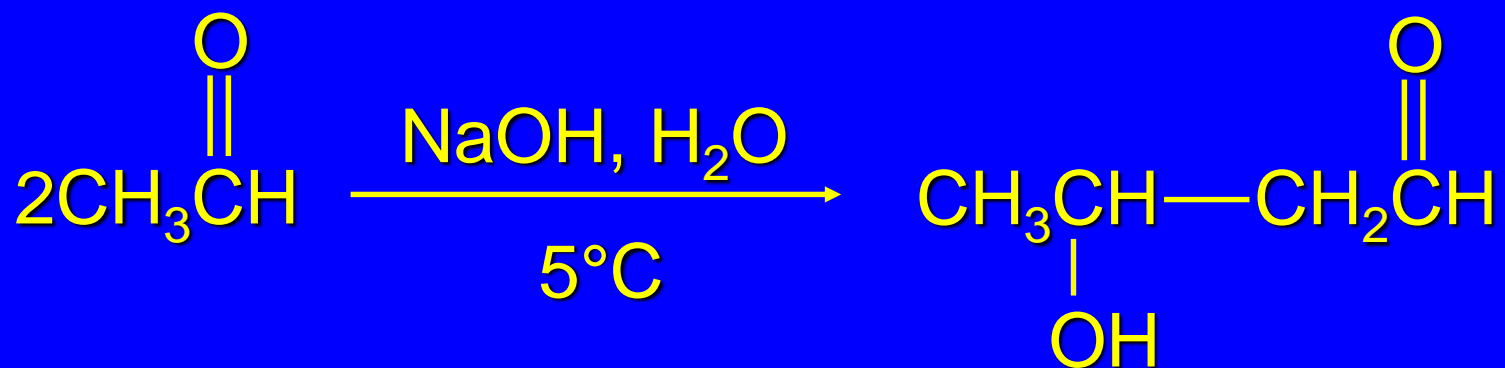






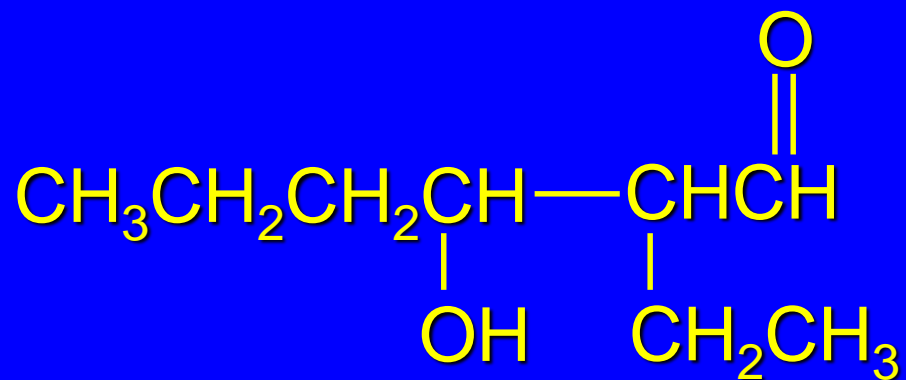
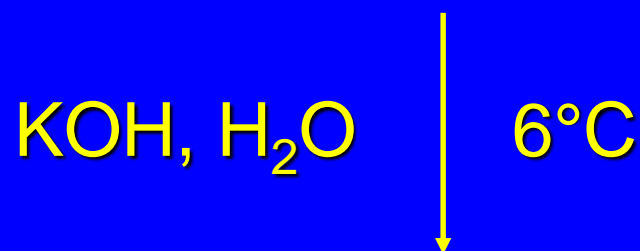
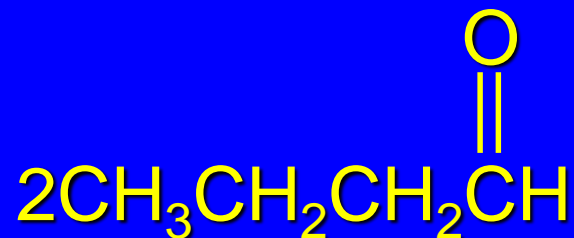


ADICION ALDOLICA DEL ACETALDEHIDO



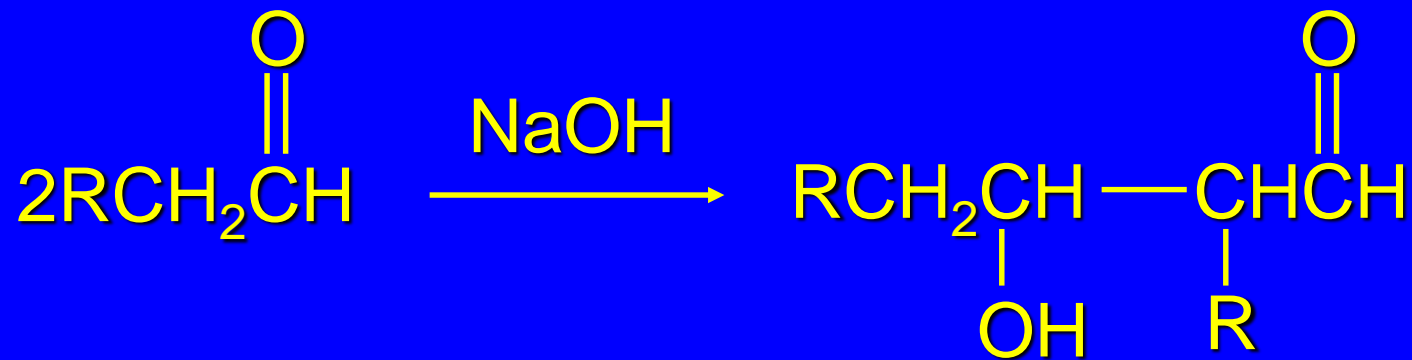
Acetaldol
(50%)

ADICION ALDOLICA DEL BUTANAL

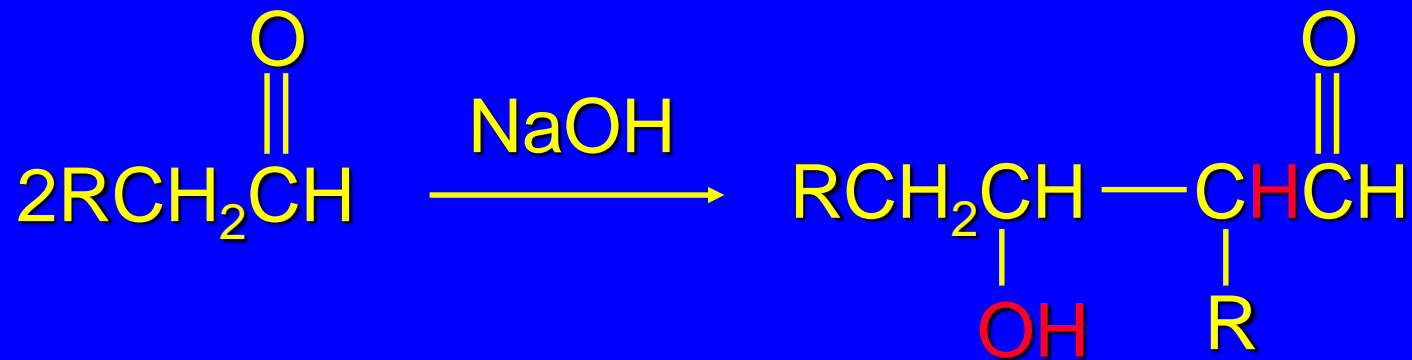


(75%)

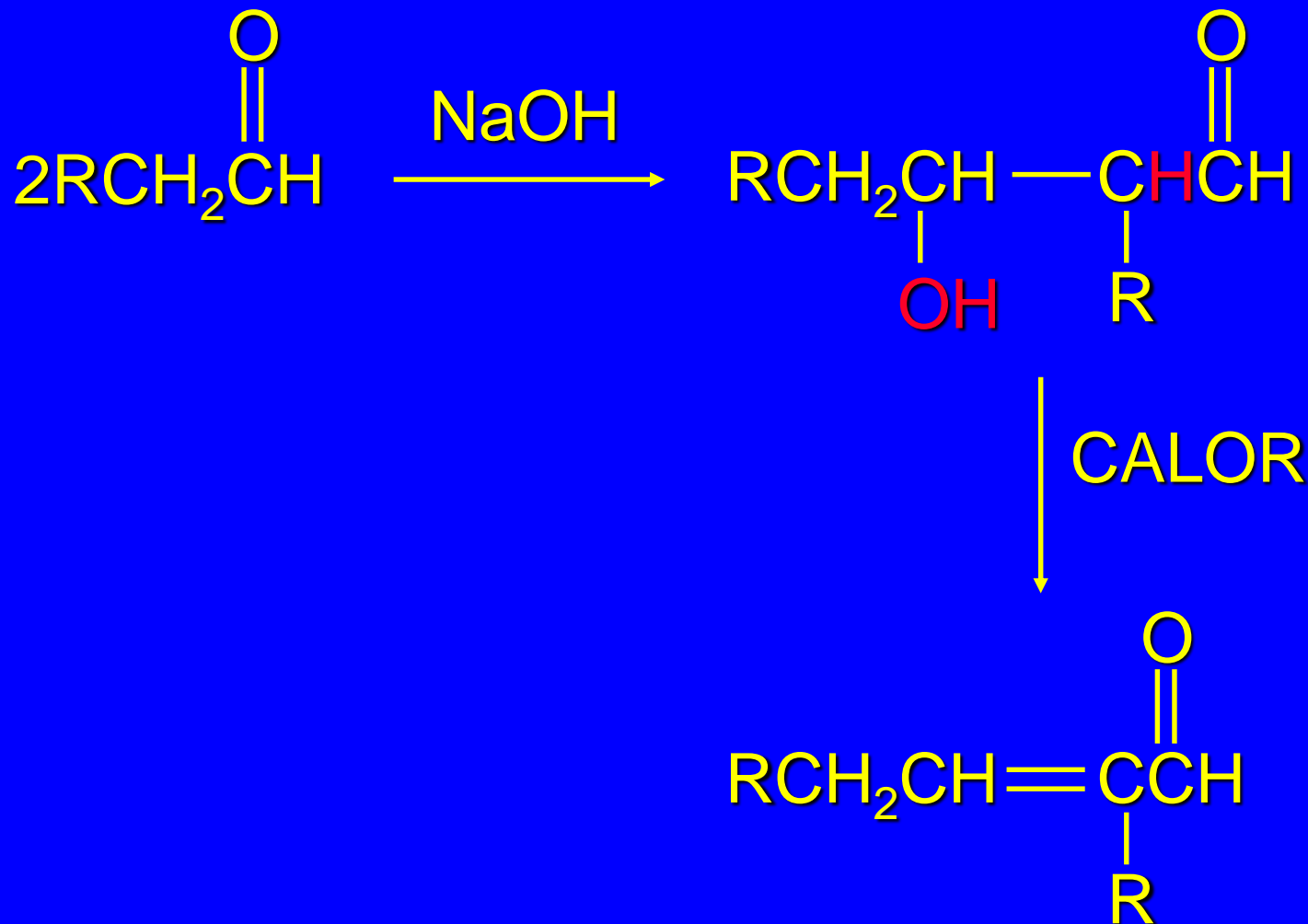
CONDENSACION ALDOLICA



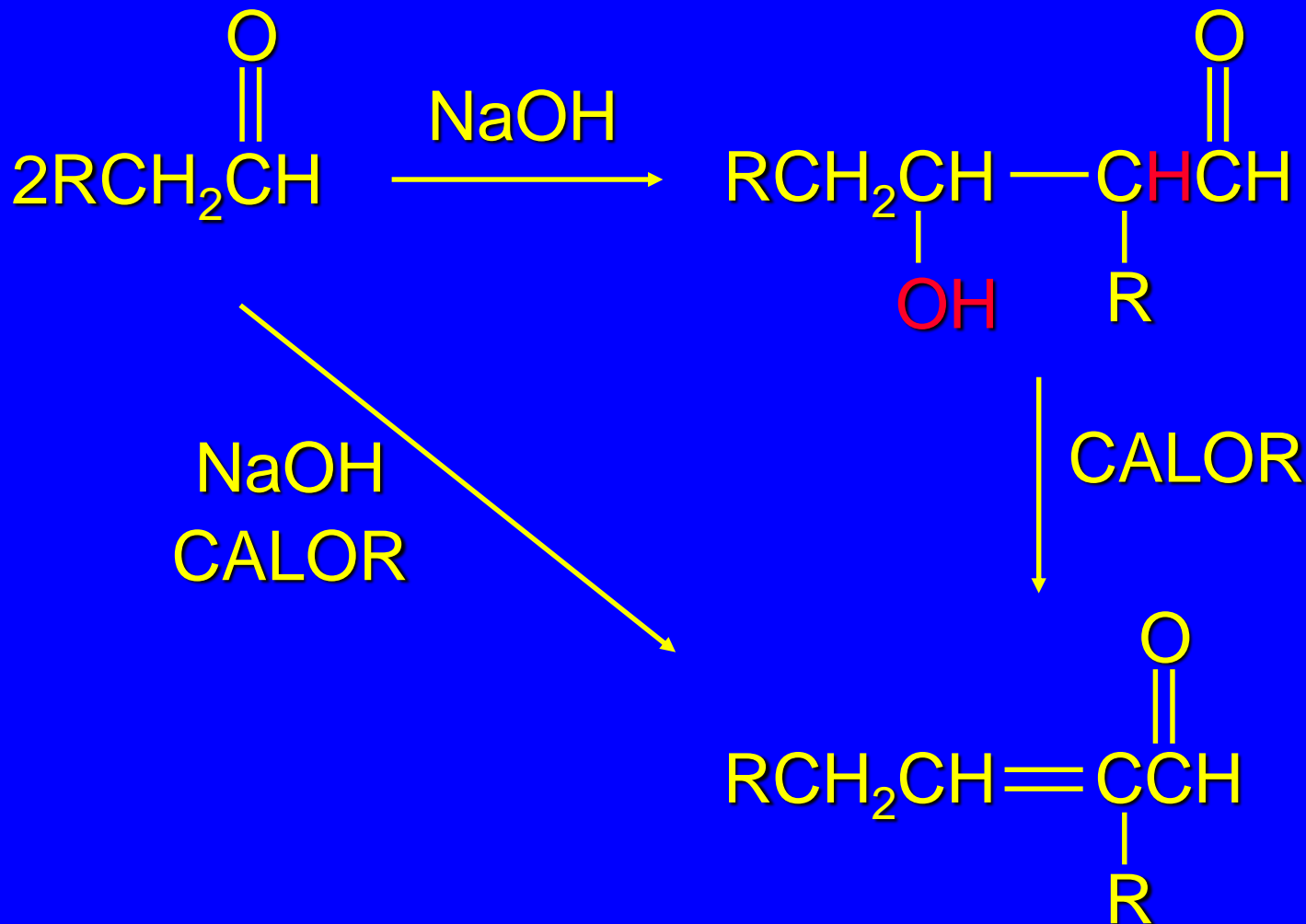
CONDENSACION ALDOLICA



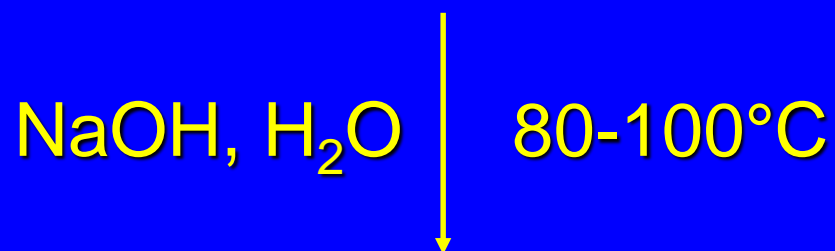
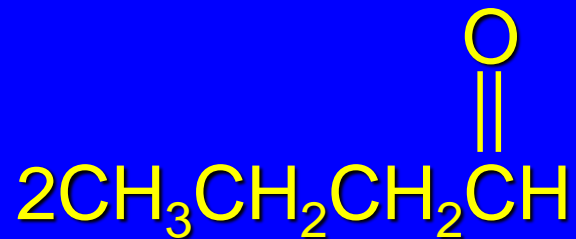
CONDENSACION ALDOLICA



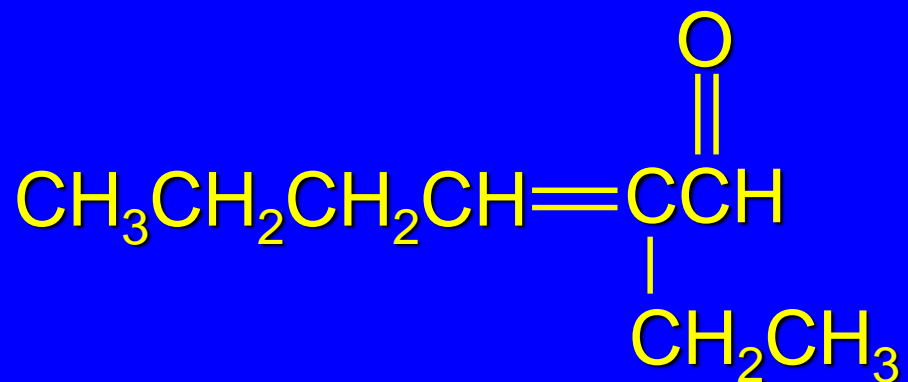
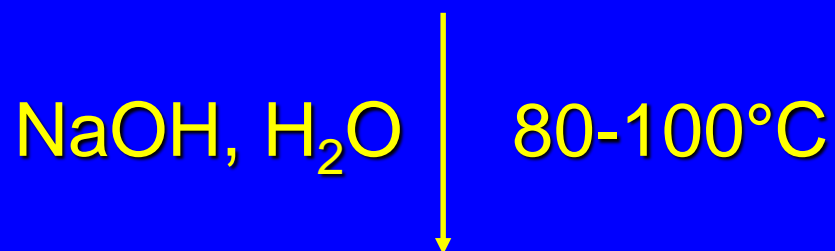
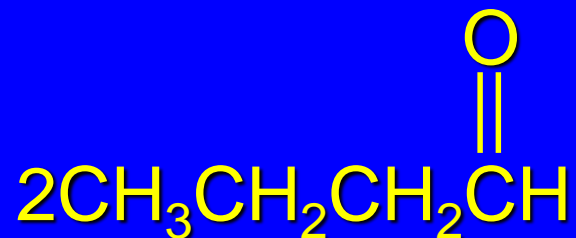
CONDENSACION ALDOLICA



CONDESACION ALDOLICA DEL BUTANAL

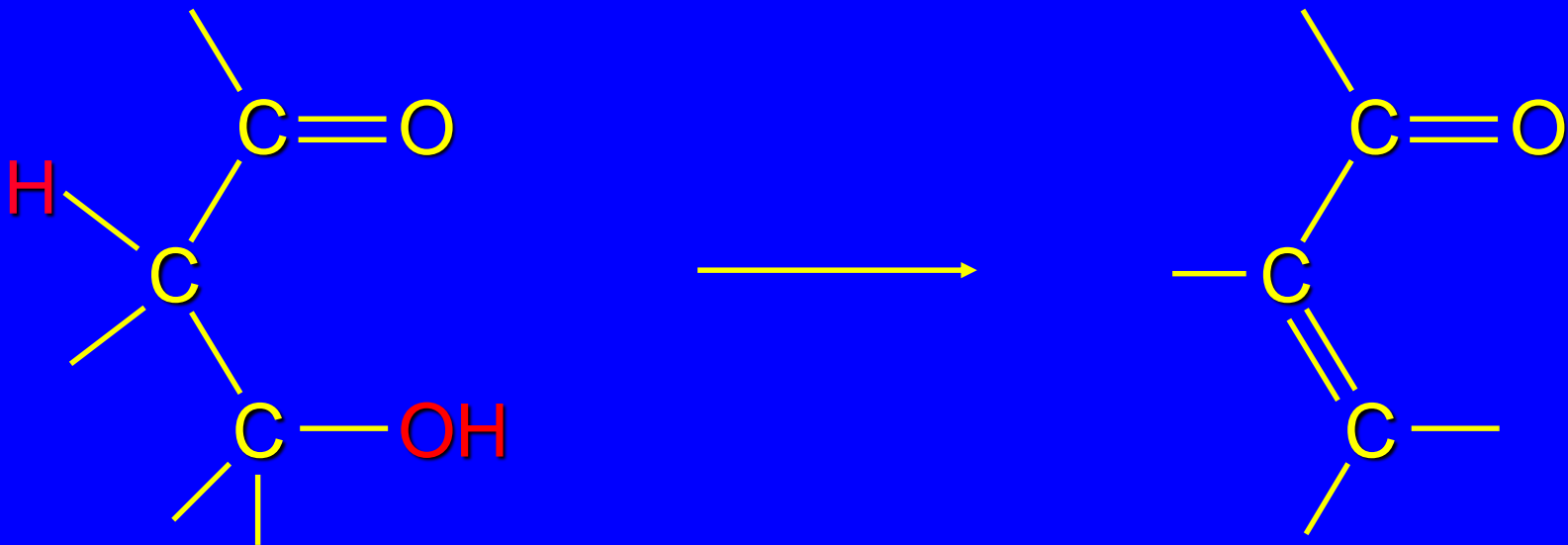


CONDENSACION ALDOLICA DEL BUTANAL

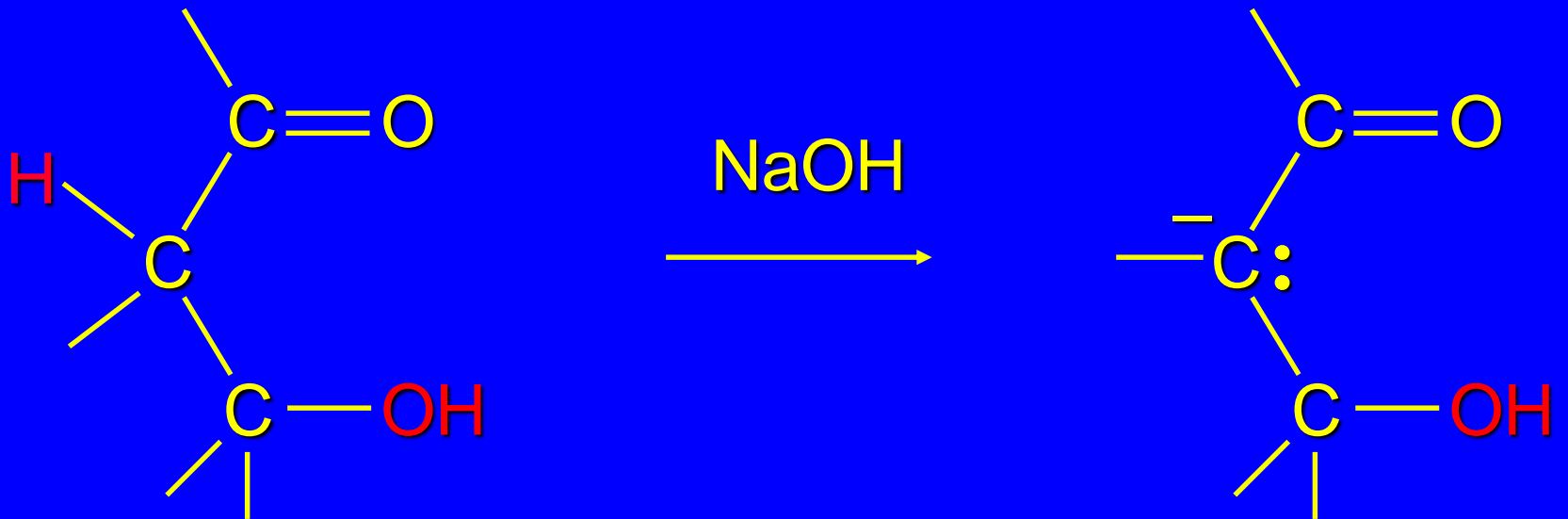


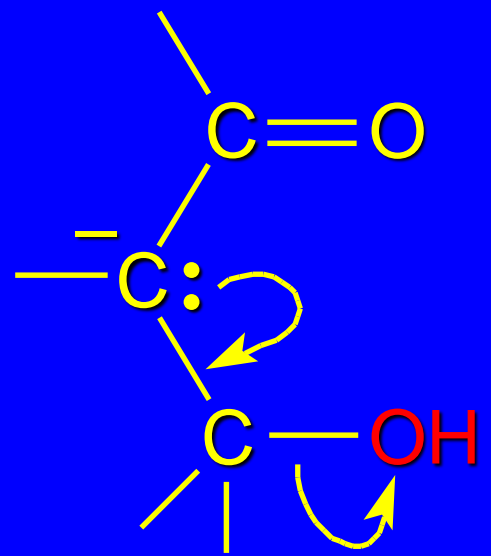
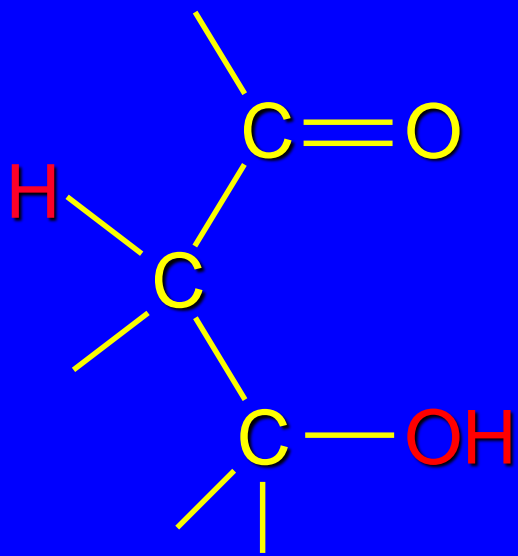
(86%)

DESHIDRATACION

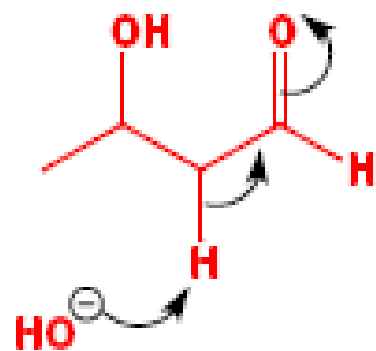


DESHIDRATACION

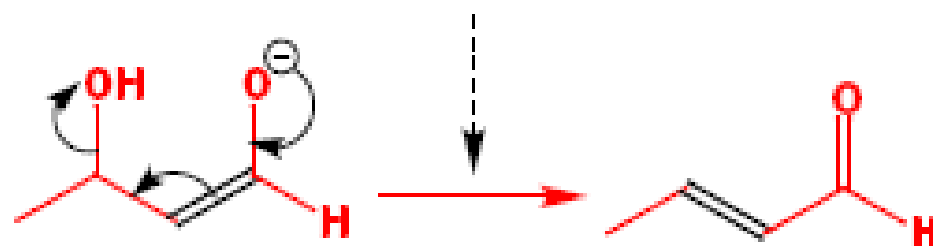




the enolization step

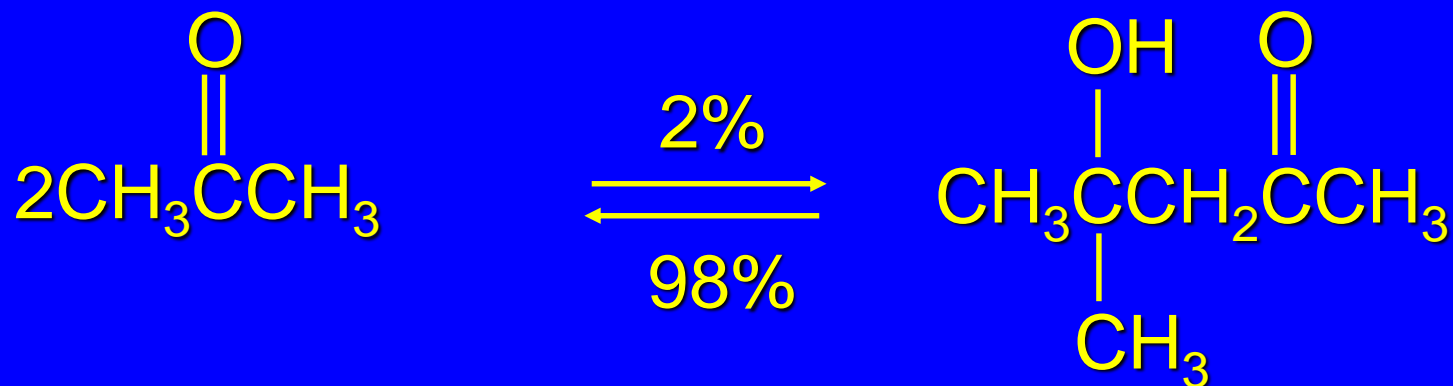


the elimination step

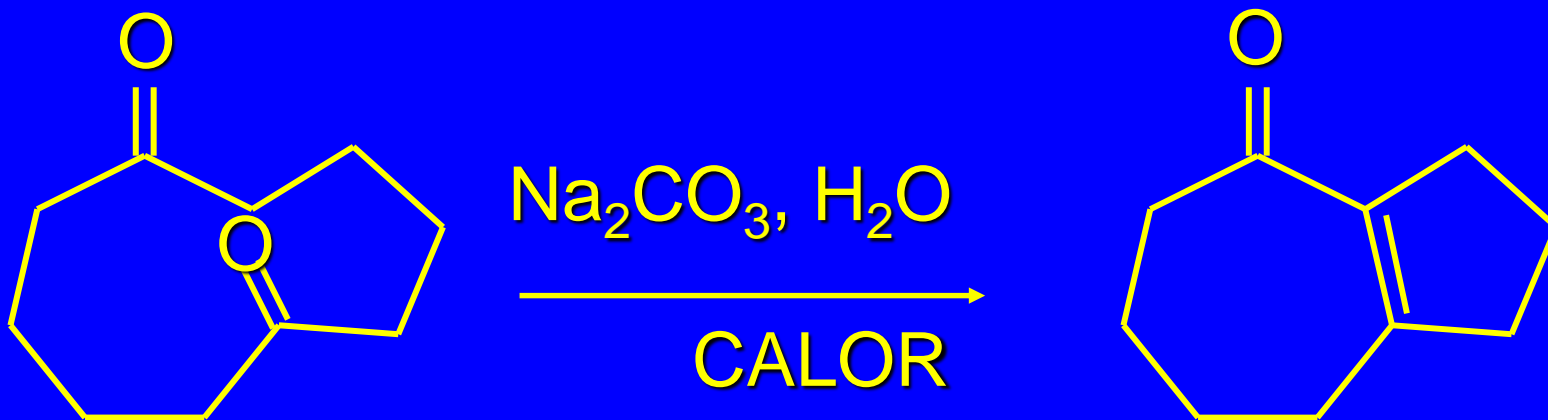


enolate ion

REACCION ALDOLICA EN CETONAS

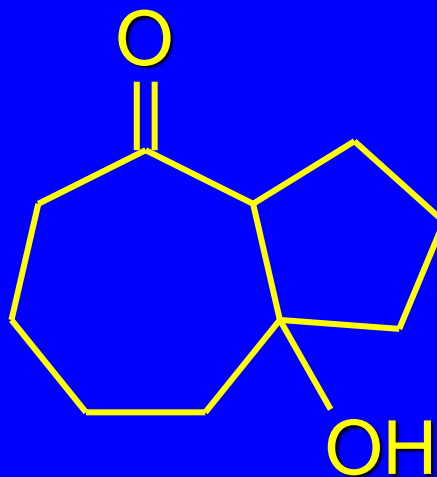


CONDENSACION ALDOLICA INTRAMOLECULAR

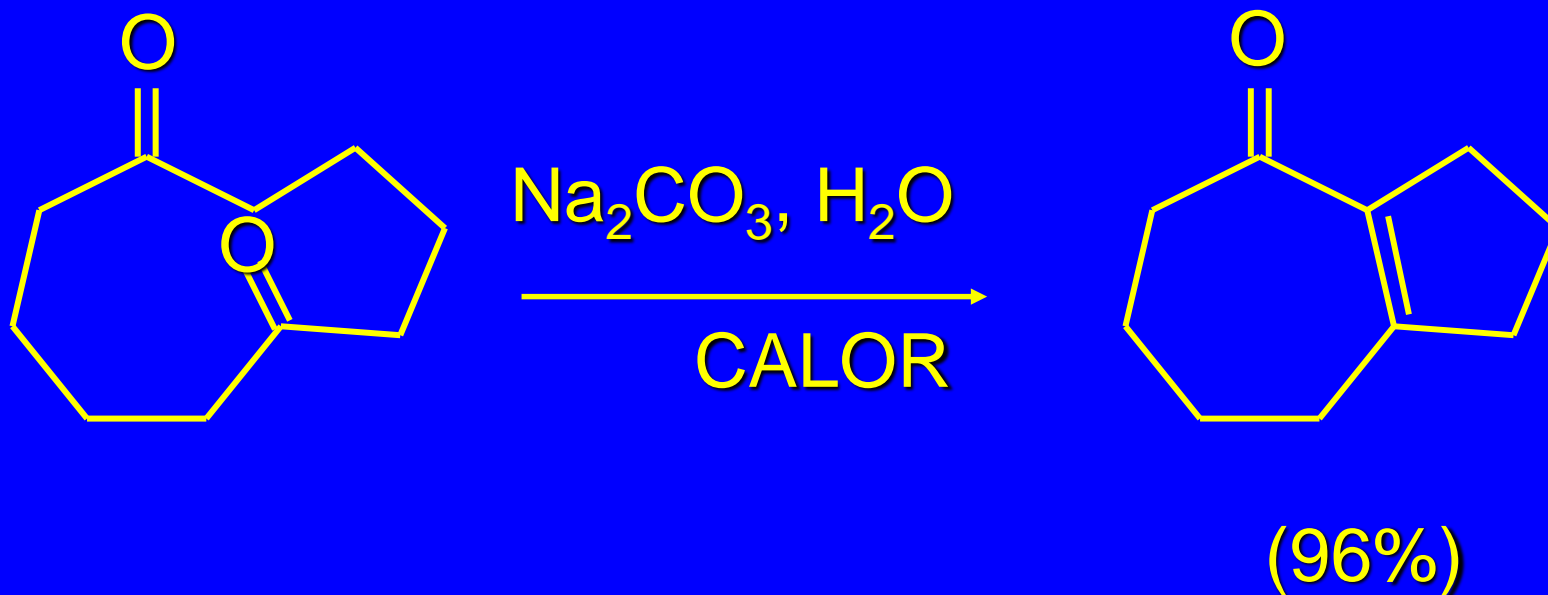


(96%)

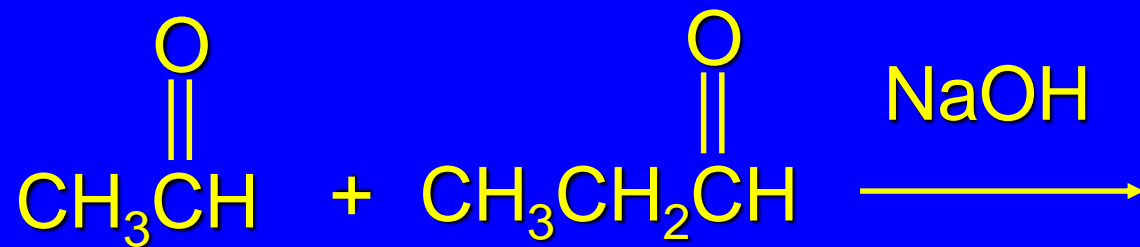
via:

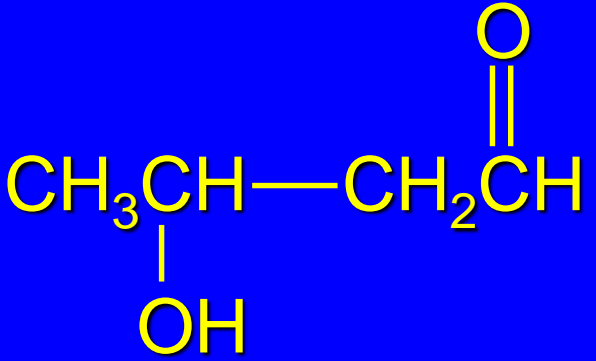
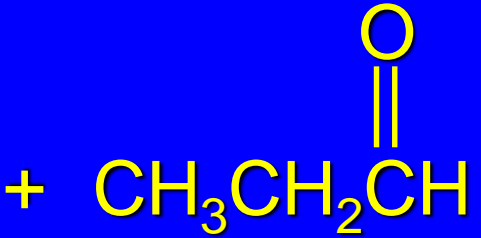
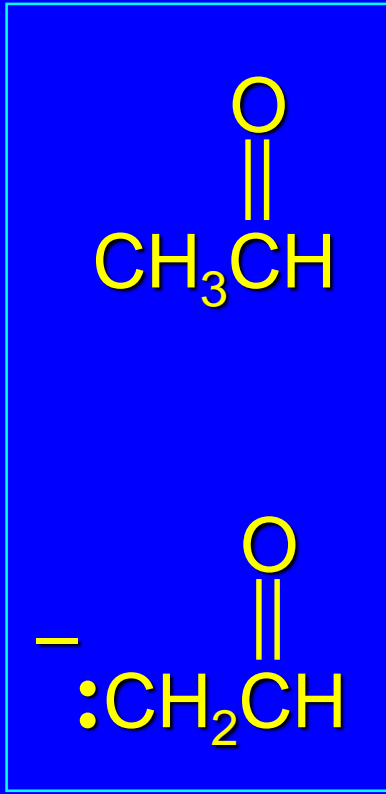


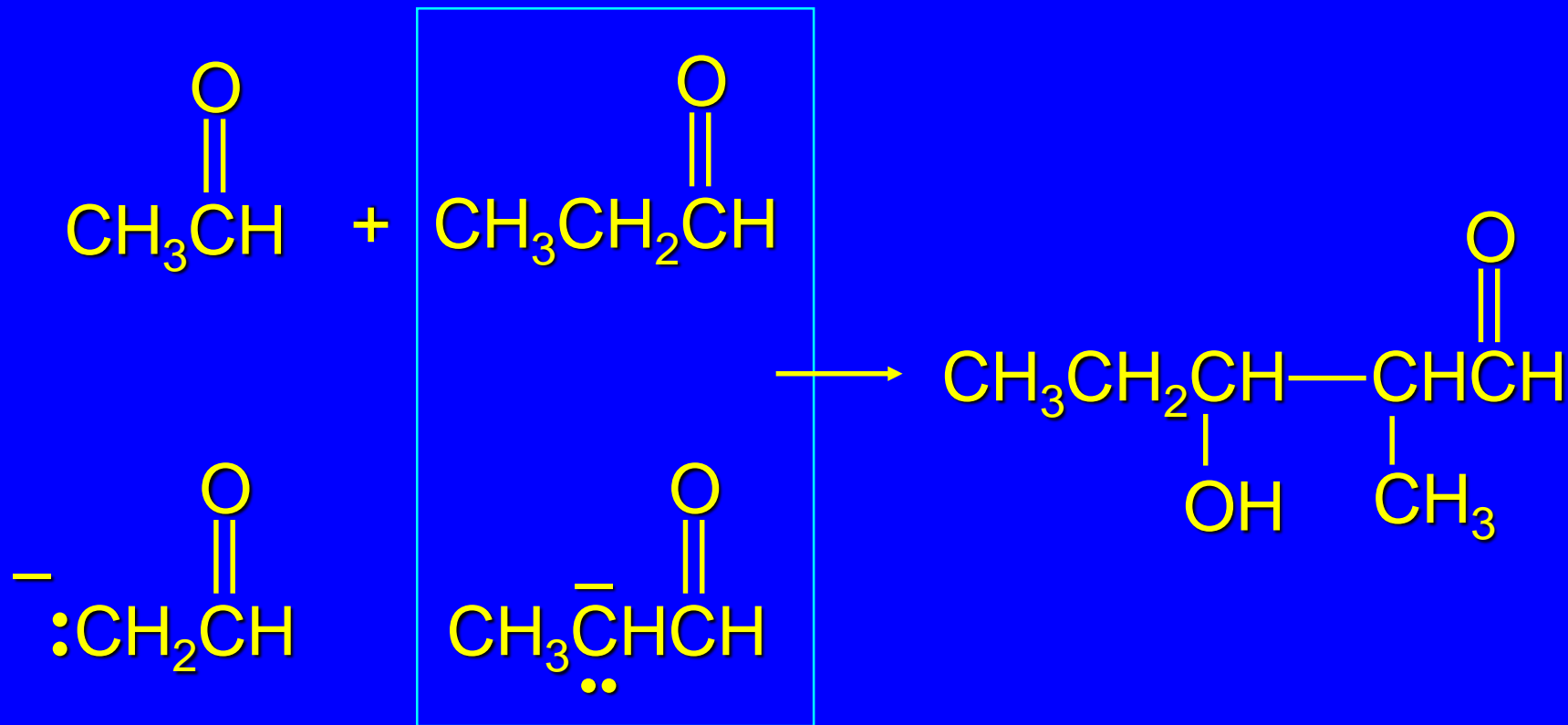
CONDENSACION ALDOLICA INTRAMOLECULAR

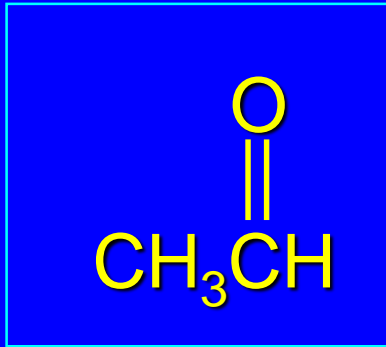


CONDESACION ALDOLICA
CRUZADA

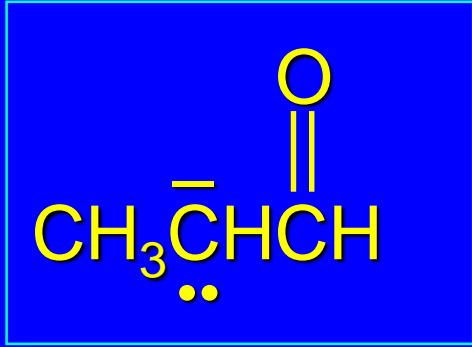
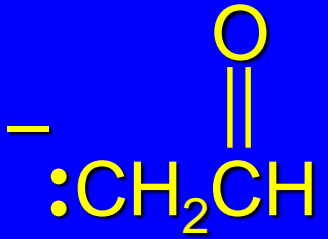
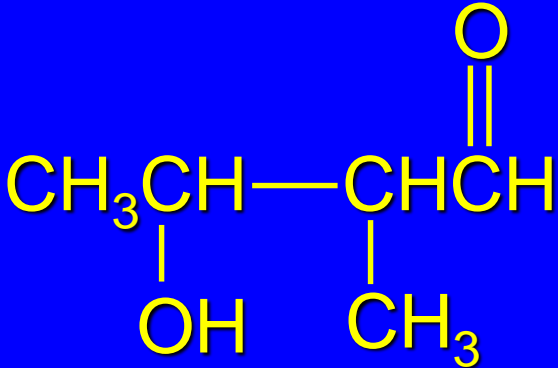
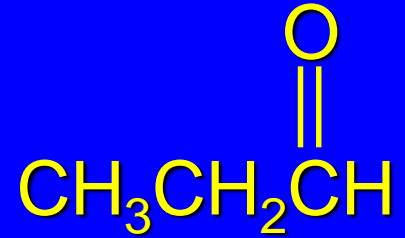


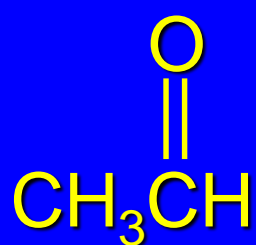




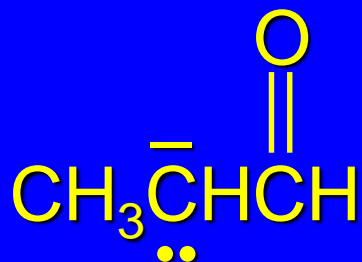
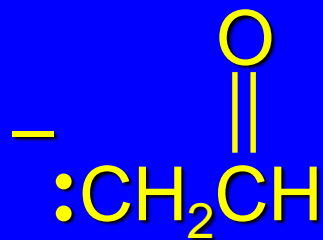
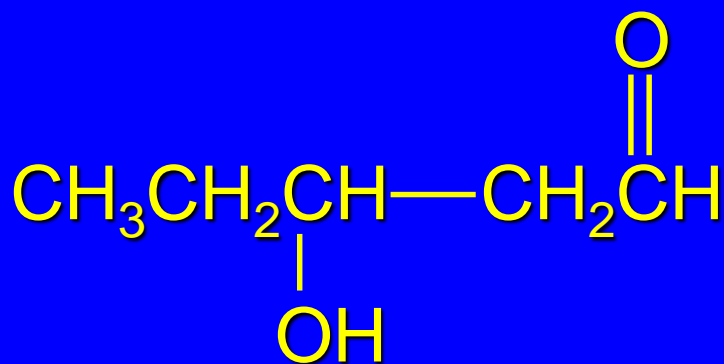
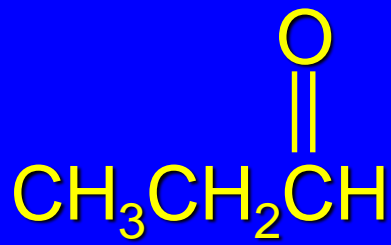


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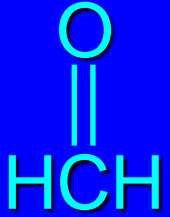




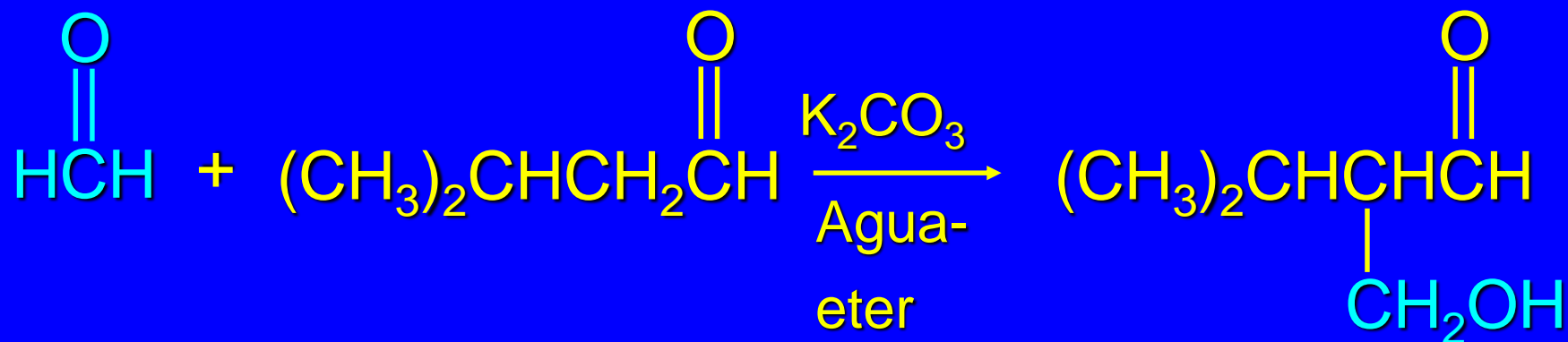
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FORMALDEHIDO

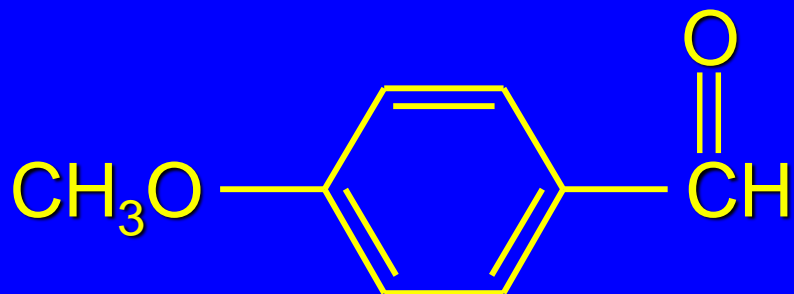


FORMALDEHIDO

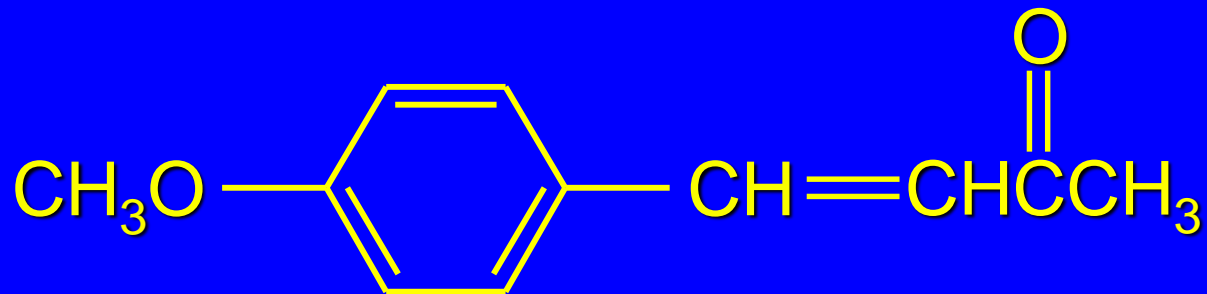
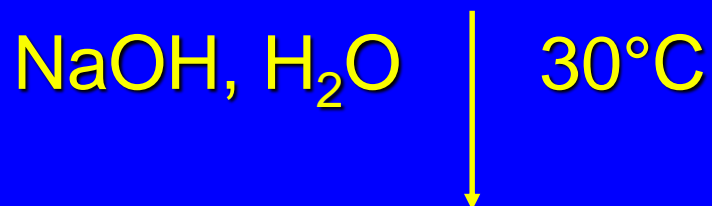
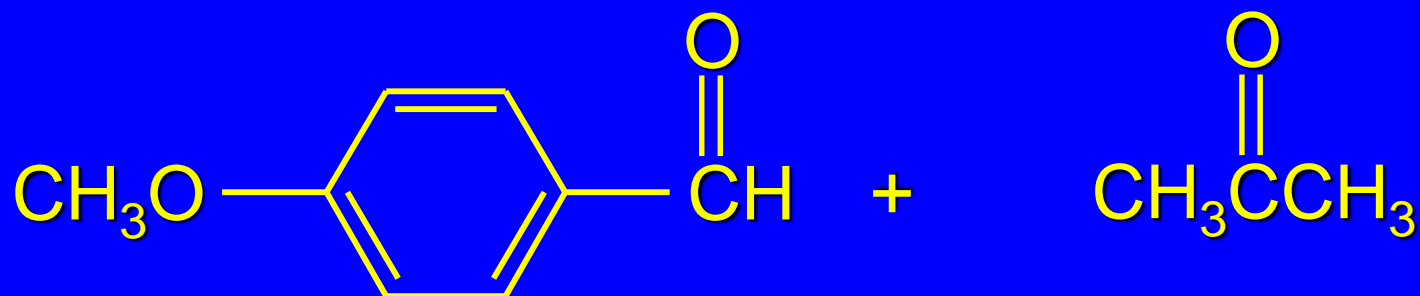


(52%)

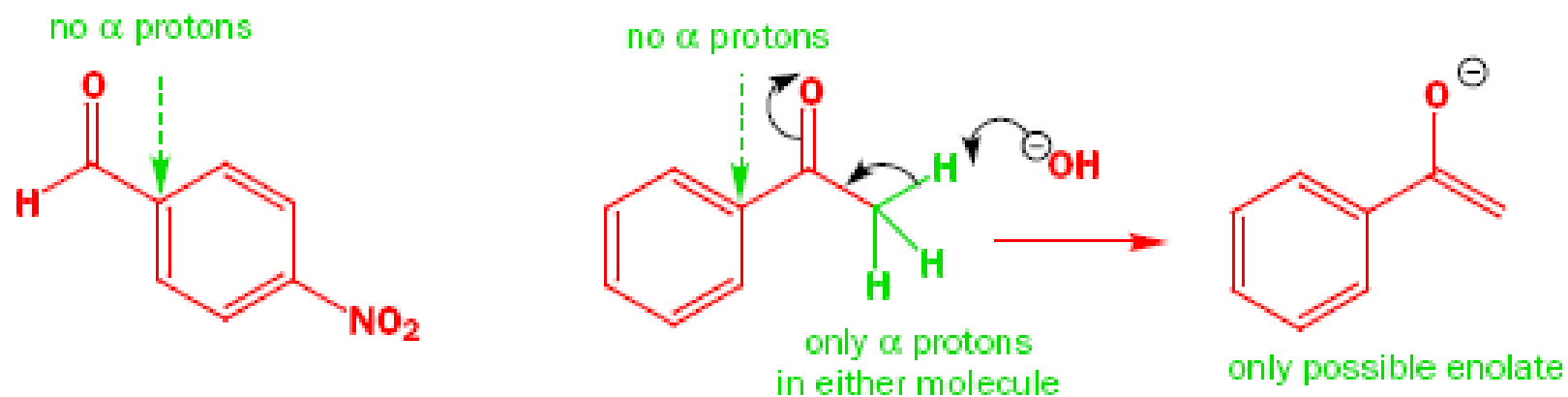
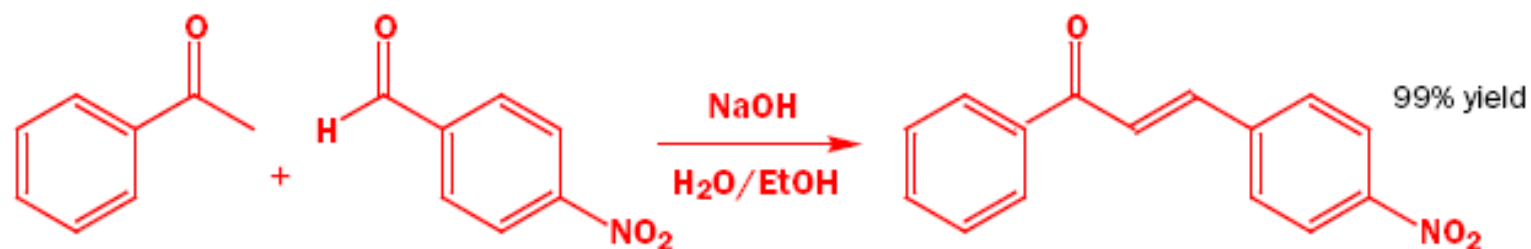
ALDEHIDOS AROMATICOS

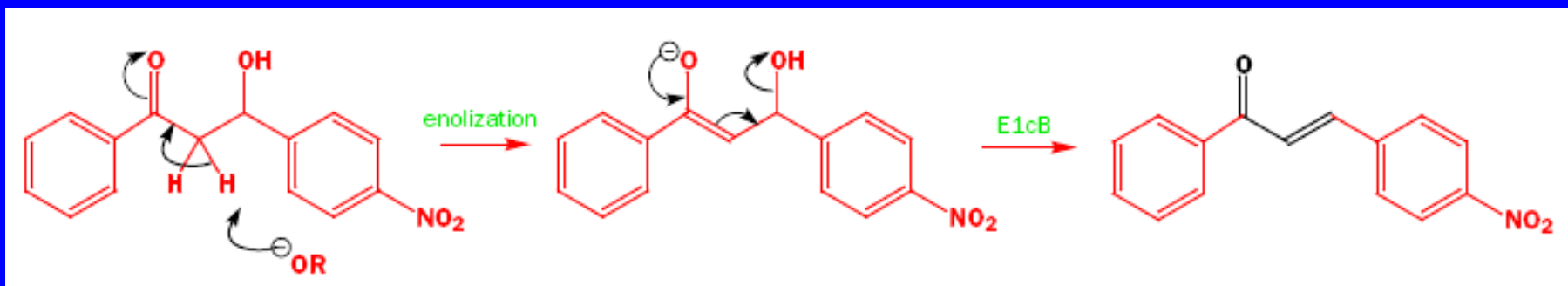
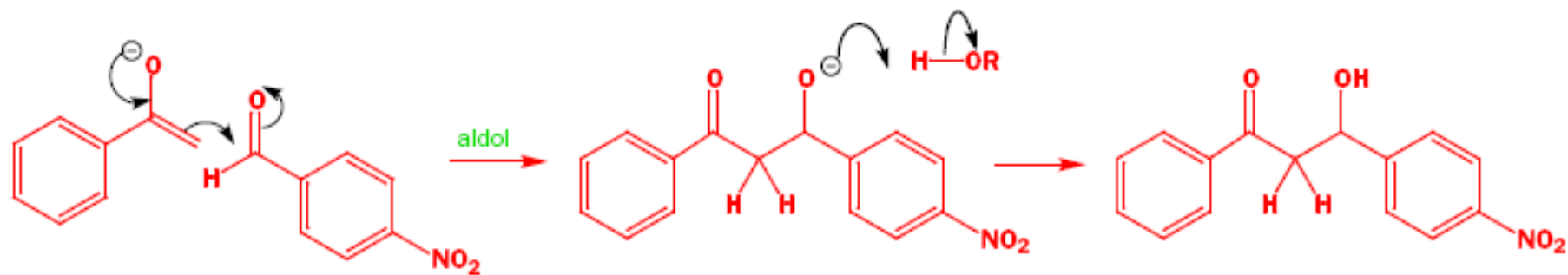


ALDEHIDOS AROMATICOS

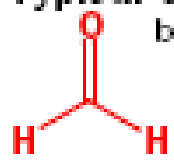
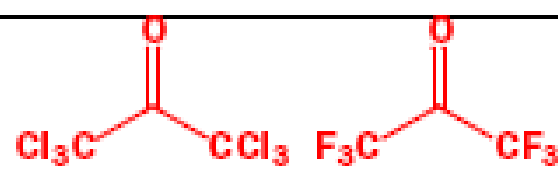
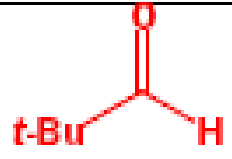
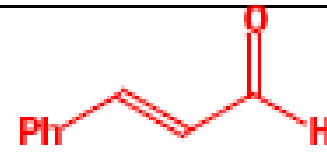
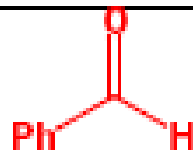
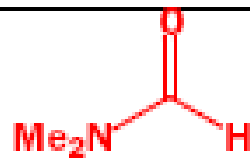


(83%)

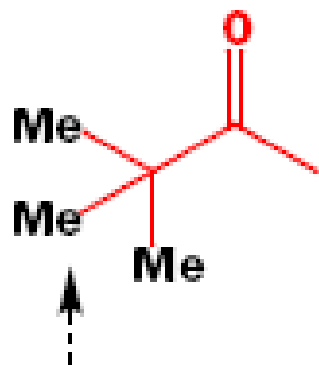




Carbonyl substituents that block enolization

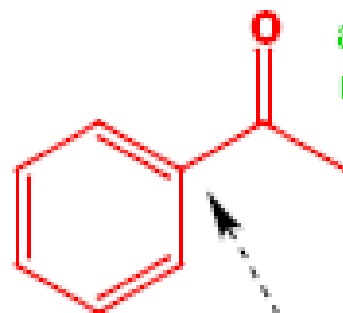
	Substituent	Typical compounds
most reactive ^a	H	
	CF ₃ , CCl ₃	
	t-alkyl	
	alkenyl	
	aryl	
least reactive ^a	NR ₂	

a t-alkyl group
cannot enolize
as it has no
 α protons

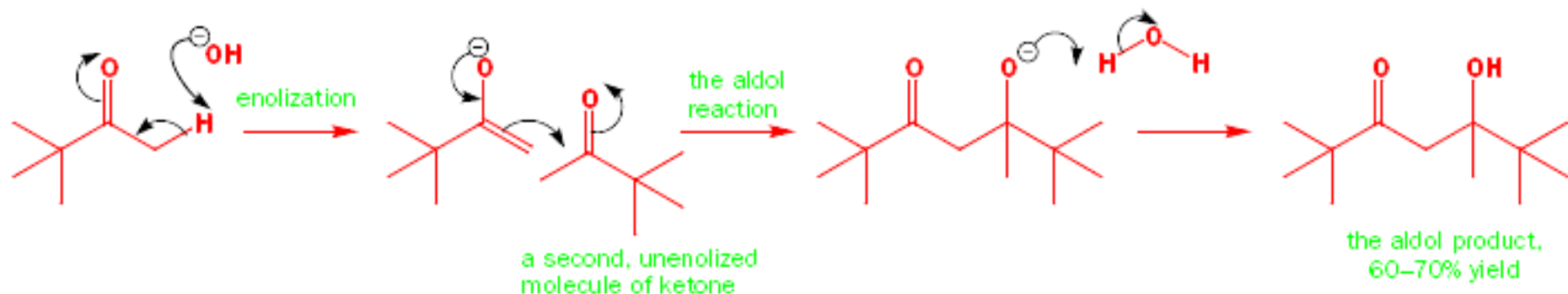


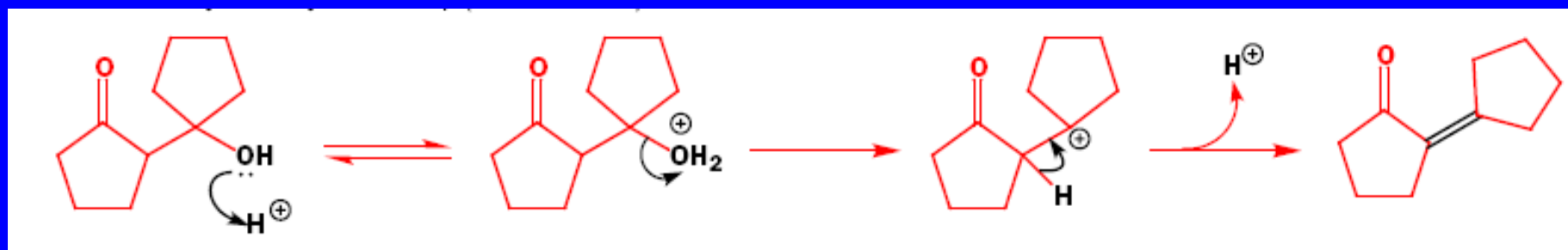
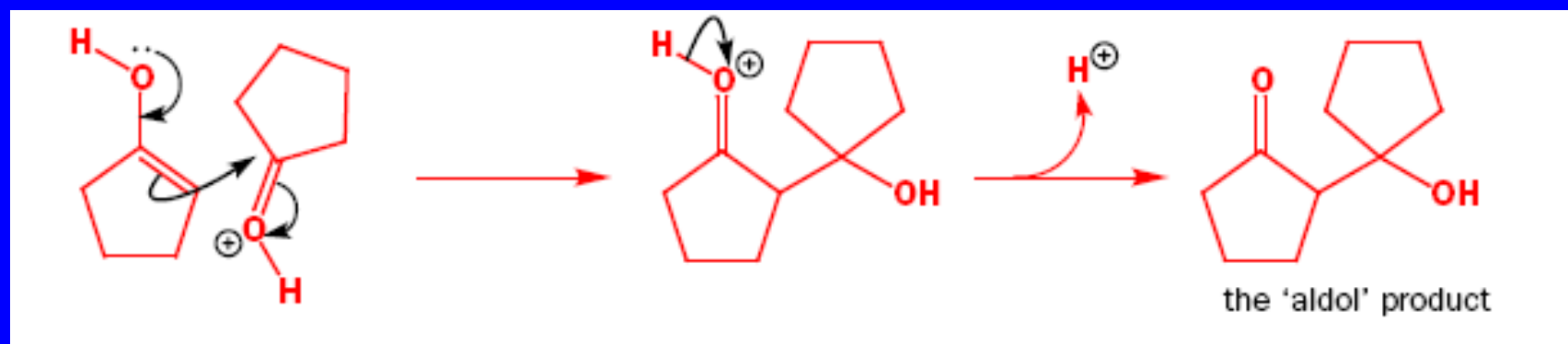
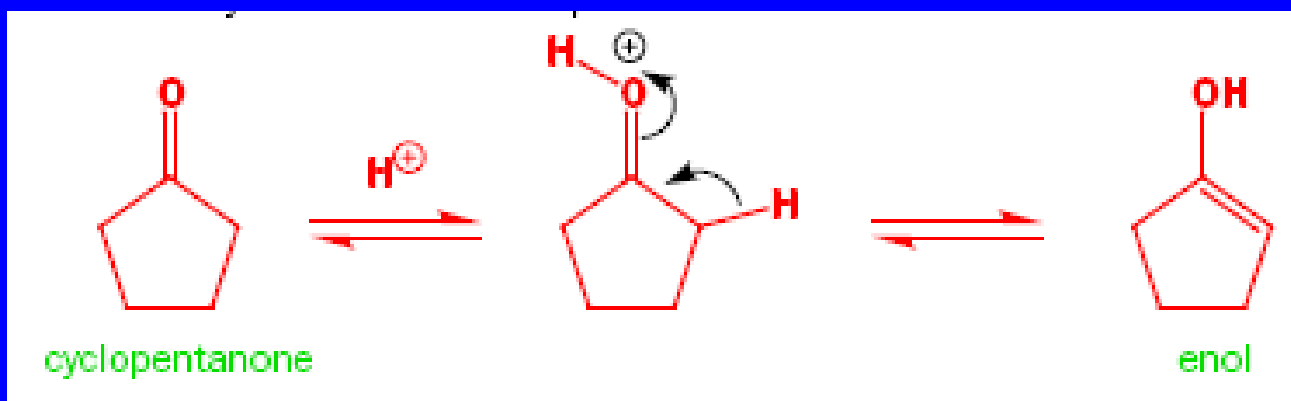
nine β protons
but no α protons

an aryl ketone has
no substituents at
the α position

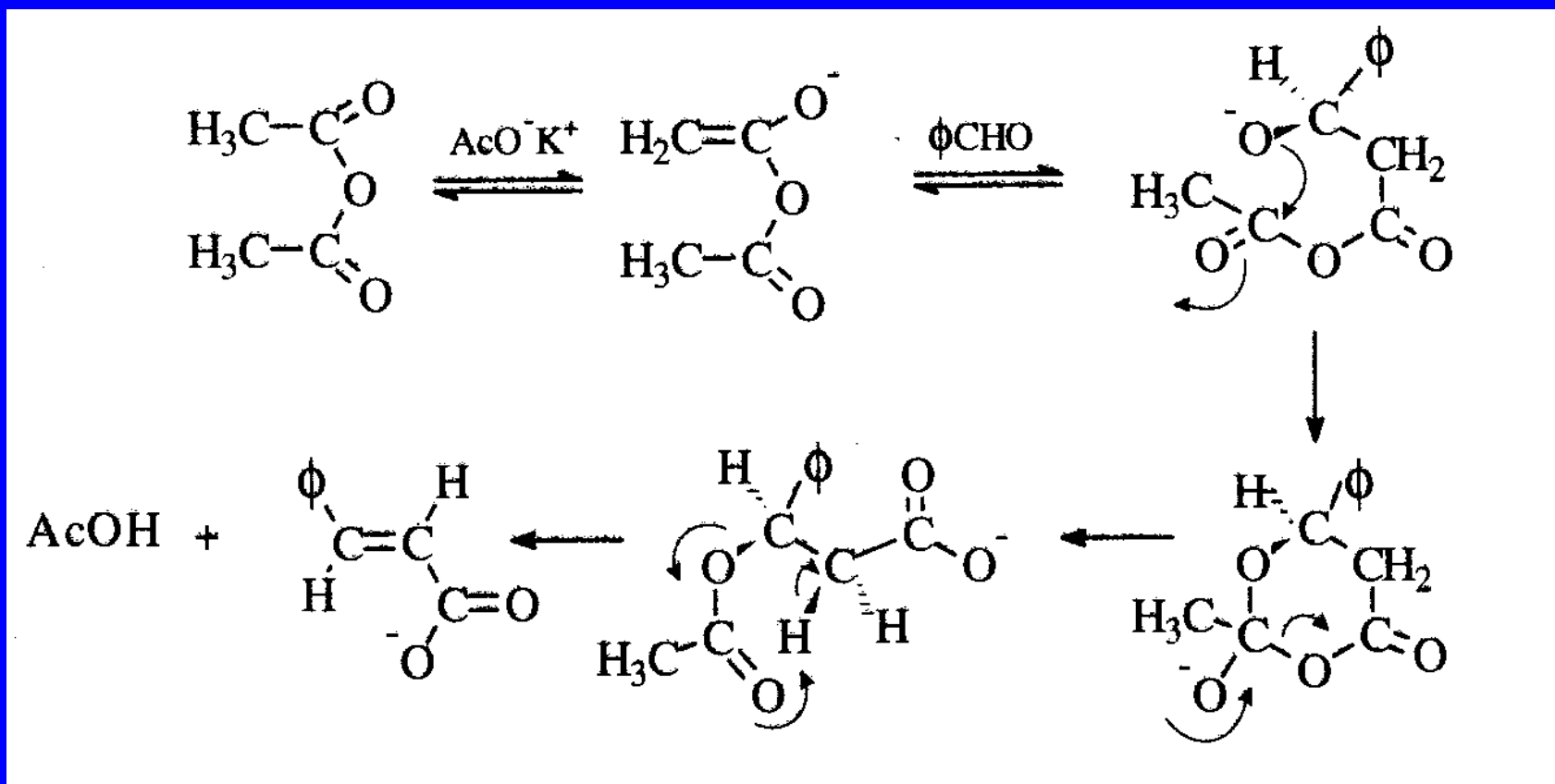


trigonal carbon atom in aryl
ring with no substituents



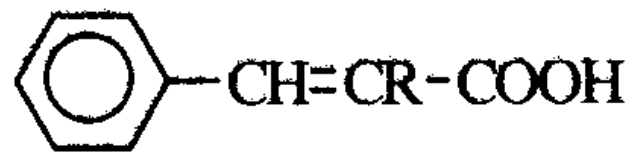


1. Reacción de Perkin :





a



b

2. Condensación de Darzen:

