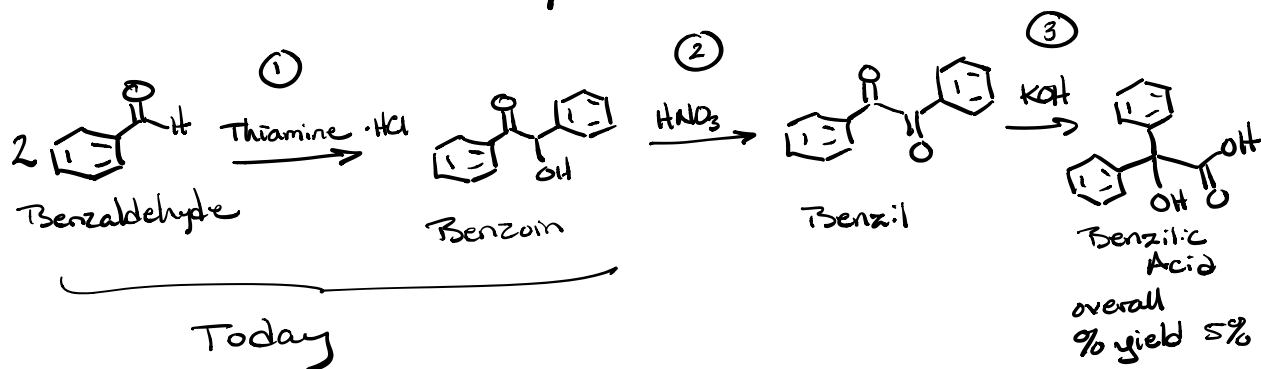
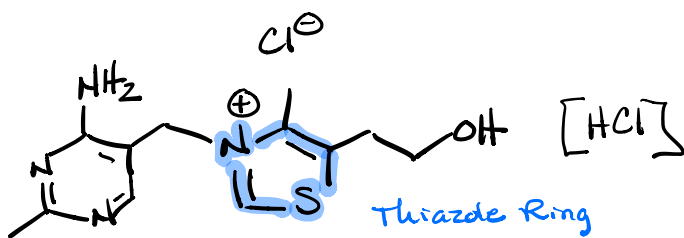


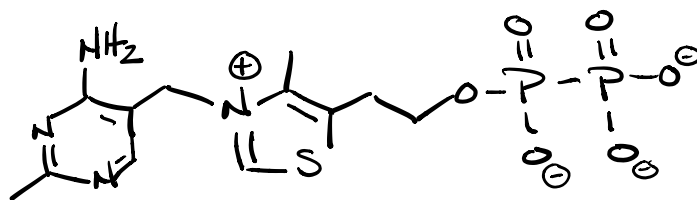
Multistep Synthesis



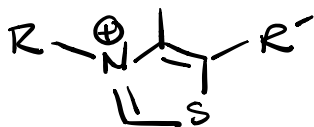
Thiamine · HCl



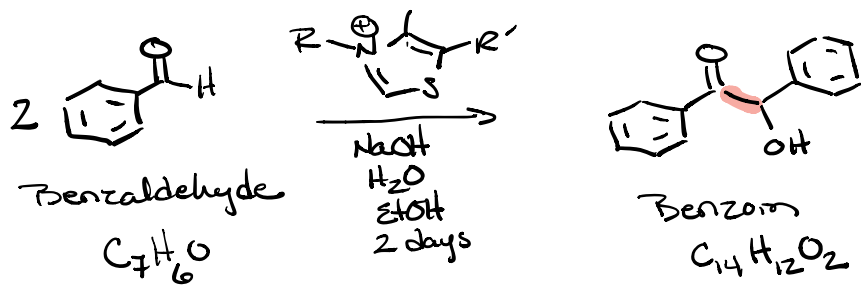
Thiamine = vitamin B3
Coenzyme



Thiamine pyrophosphate

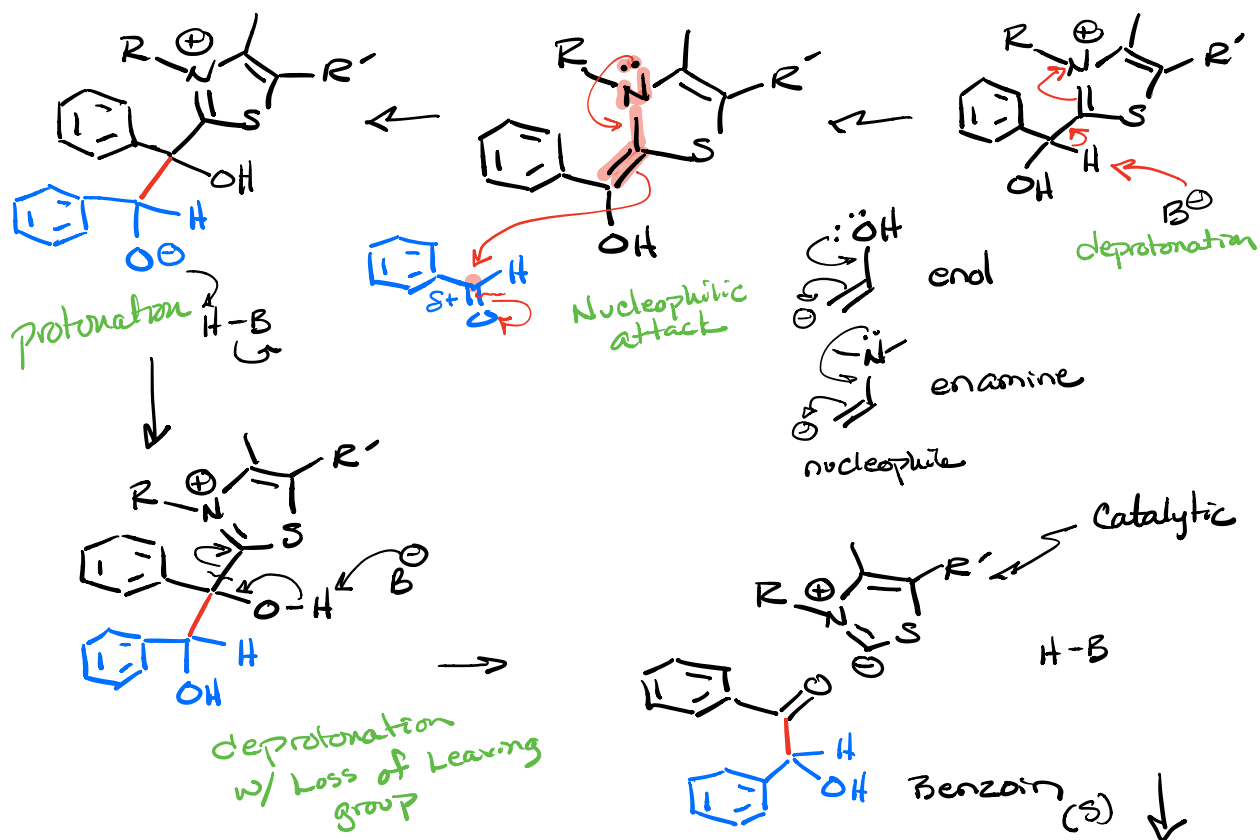
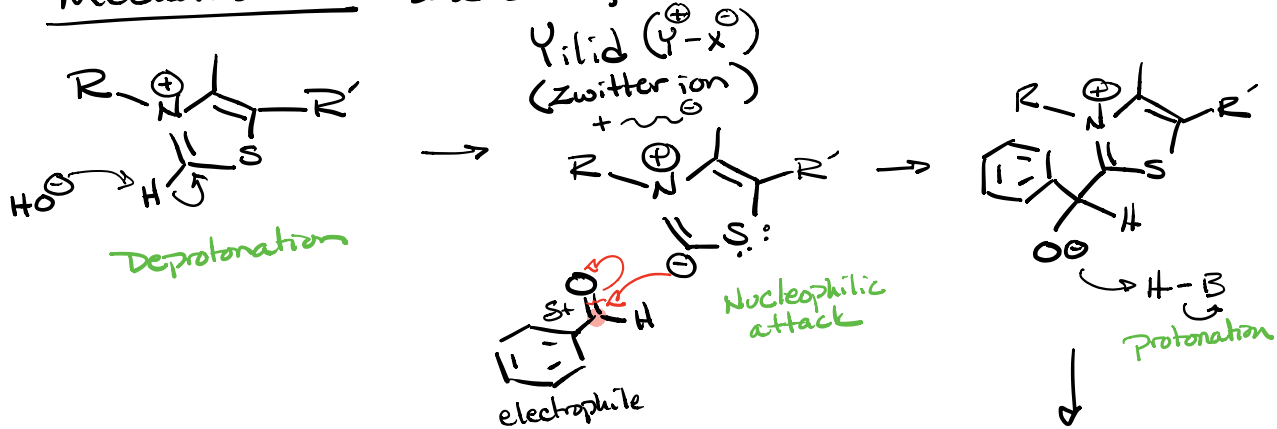


Appriated structure



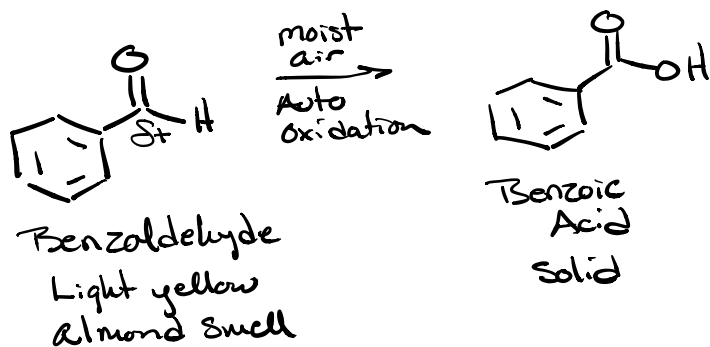
Mechanism

Base catalyzed \Rightarrow 1st step deprotonation



Procedure

- 0.30 g thiamine · HCl & place into a 25-ml Erlenmeyer flask
- Add 0.45 mL DI H₂O & swirl to dissolve
- Add 3.0 mL 95% EtOH
- Add 0.9 mL 2 M NaOH (aq)
 - * Turns bright yellow & fades w/ time to dull yellow
- Tare the flask
- Add 0.9 mL benzaldehyde
- Reweigh flask to get mass benzaldehyde
- Sit for 2 days

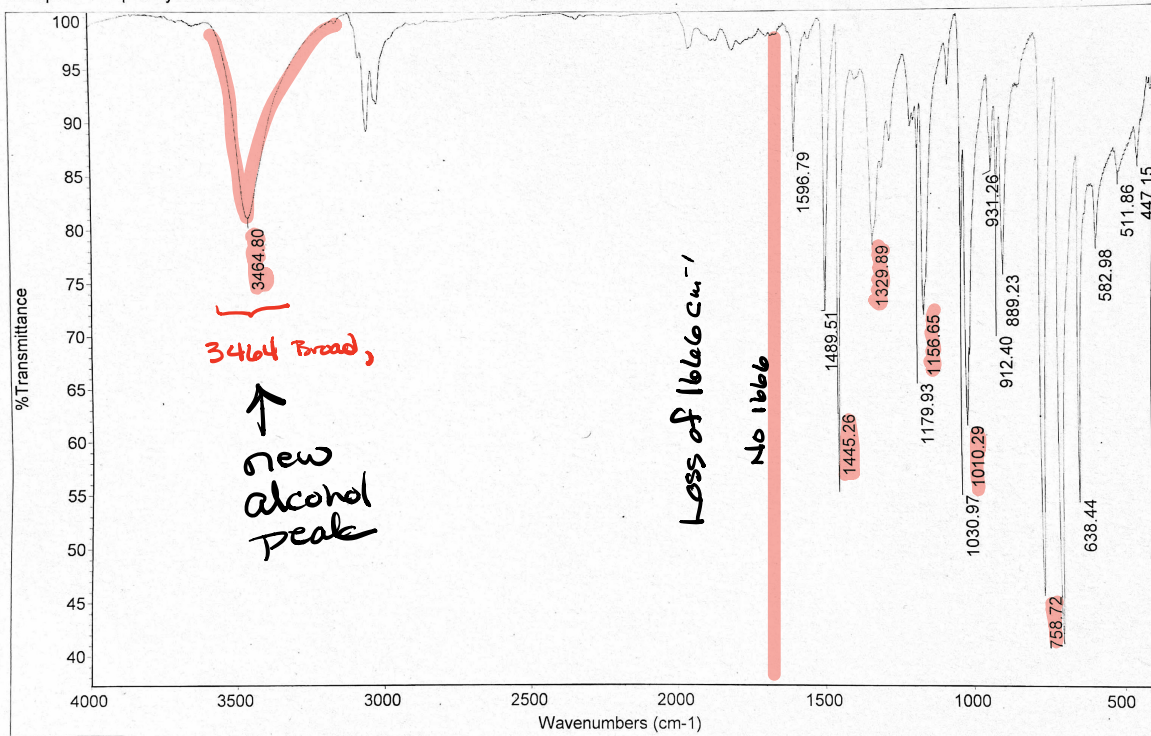


workup

- Ice for 10 min
- filter on hirsch & Rinse w/ 1 mL 0°C 95% EtOH
- Recrystallize 95% EtOH
- mass \Rightarrow % Yield
- MP
- FTIR

Important IR Wavelengths

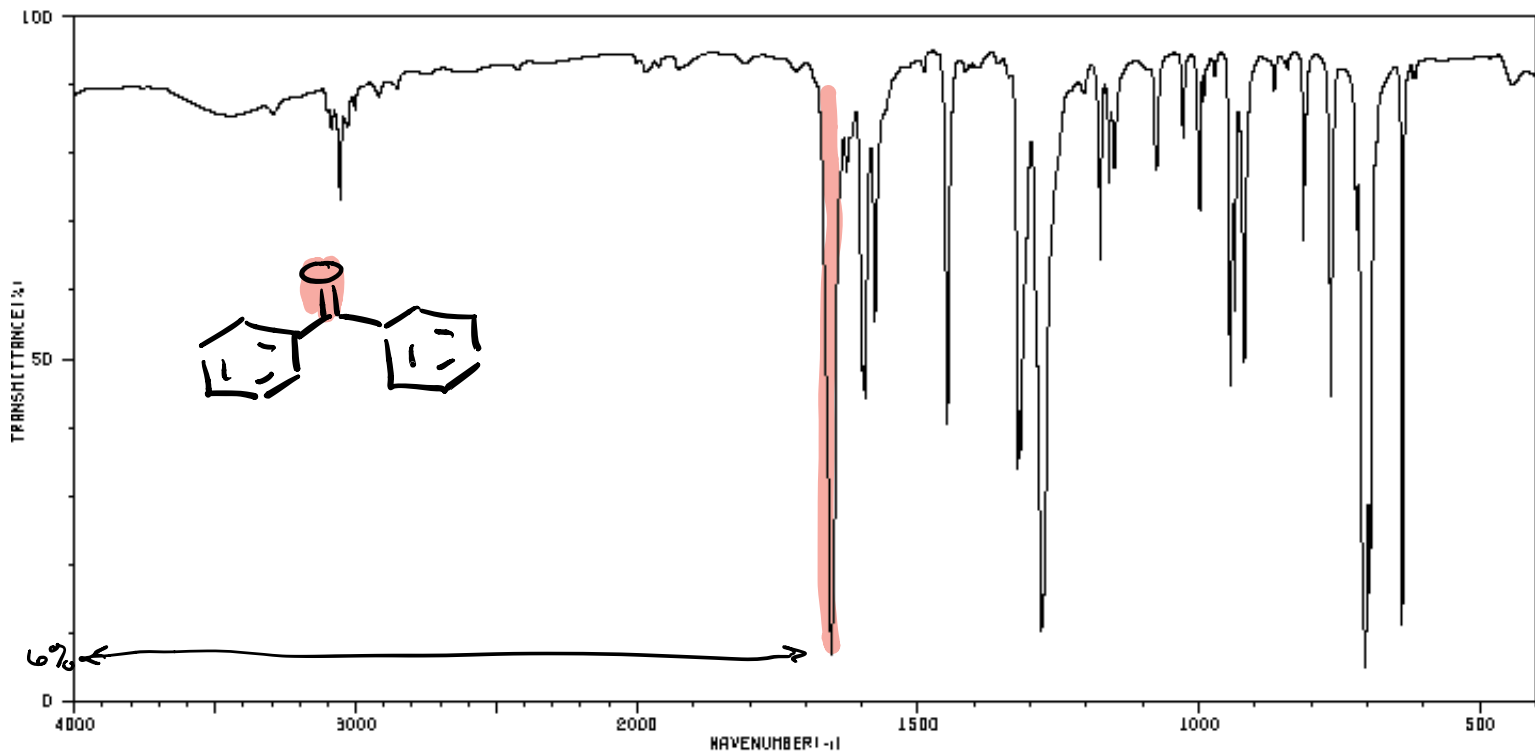
Student: Jason Camara
Sample: Triphenylmethanol



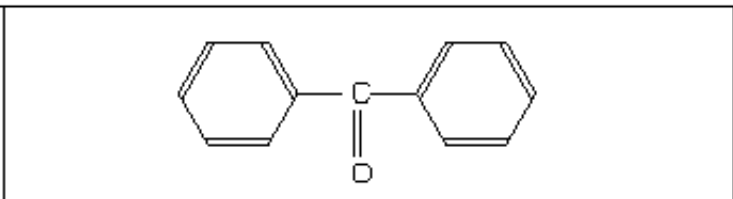
Comments: Recrystallized Product. White Solid.

BENZOPHENONE

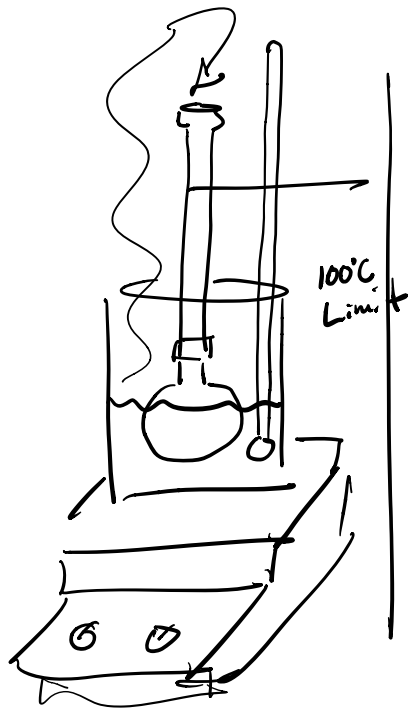
C₁₃H₁₀O



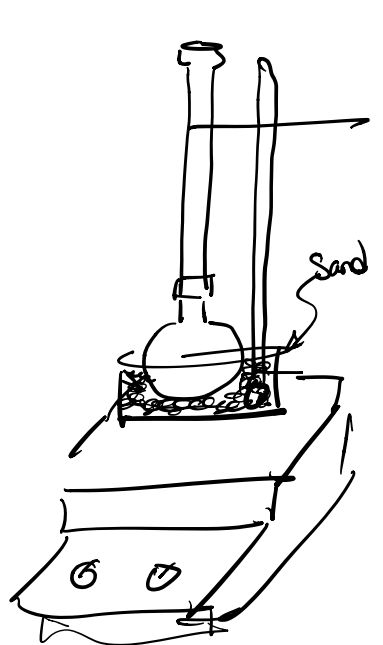
3291	81	1666	6	1206	86	992	84	720	66
3088	81	1627	74	1176	62	945	44	705	4
3067	79	1595	42	1162	72	936	55	697	15
3067	70	1677	63	1161	74	919	47	639	10
3030	81	1449	38	1076	74	867	86		
3005	84	1323	32	1028	79	814	64		
2919	84	1281	10	999	68	766	42		



Pavia



Our Rxn



✓
Cheap

no H₂O
Bath

