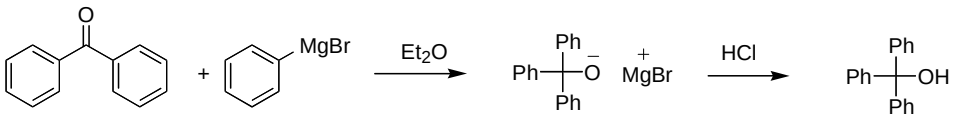
Preparation of Triphenylmethanol



Form	$C_{13}H_{10}O$				$C_{19}H_{16}O$
M. Wt.	182.21				260.32
Conc		3 Molar			Th. Yld.=.001 Moles
Vol		.5mL	2mL	2.5mL	=.260gms
Gms	.182				
Moles	.001	.0015			

To a 5-ml reaction vial equipped with a spin vane and a serum cap was added benzophenone (0.182 g, 0.001 moles) and anhydrous diethyl ether (2 mL). The mixture was stirred until all solids had dissolved at which time a 3-molar ether solution of phenyl magnesium bromide (0.5 mL, 0.0015 moles) was injected into the stirred reaction mixture over a 1-minute period. An exothermic reaction ensued, and a thick white precipitate separated from solution. This precipitate soon made magnetic stirring impossible. After 5 minutes, the almost solid reaction mixture was mixed thoroughly using a small spatula, and then allowed to stand for an additional 10 minutes. Subsequently, 6-molar HCl (2.5 mL) was **carefully** added to the solid mixture. After stirring for a few minutes, all solids had dissolved yielding a two-phase solution. The top (organic) phase was removed and added to a 10-mL Erlenmeyer flask. The aqueous layer was again extracted with ether (3 mL). The ether extracts were combined and dried using anhydrous Na_2SO_4. After separating Na_2SO_4 from solution (decantation or filtration), the solvent was evaporated to give an oily yellow/white solid. This solid was sequentially triturated with petroleum ether (30-60 $^{\circ}$C, 3 mL), vacuum filtered, washed with petroleum ether (3 x 1 mL), and air dried. The resulting white solid was recrystallized from 2- propanol to give the desired triphenylmethanol as a white solid (0.161 g, 61.9%): mp =162-163 $^{\circ}$C; IR 3450 cm^{-1} (OH).