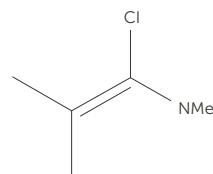


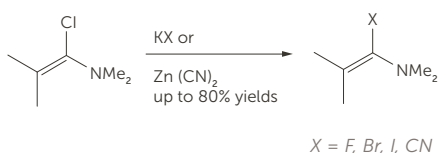
# 1-Chloro-N,N-2-trimethyl-1-propenylamine (Ghosez's Reagent)

Product number: 2122 | CAS number: 26189-59-3 |  $C_6H_{12}ClN$  | Molecular weight: 133.62

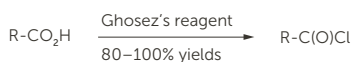
1-Chloro-N,N-2-trimethyl-1-propenylamine is a moisture sensitive, distillable liquid. Ghosez's reagent has been used in a number of synthetic transformations that include the conversions of carboxylic acids to acid halides, alkyl alcohols to alkyl halides, and thiophosphoryl compounds to the corresponding phosphoryl halides.



## FORMATION OF $\alpha$ -HALO AND $\alpha$ -CYANO ENAMINE

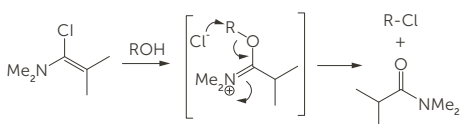


## CONVERSION OF CARBOXYLIC ACIDS TO ACYL CHLORIDES



$R = CCl_3, tBu, vinyl, 2\text{-pyrrolidinyl}, 1,3\text{-dithiolan-2-yl}, 2\text{-furanyl}, N_2CH, (MeO)_2CH, HCO, PhC(O), H, \text{ and more}$

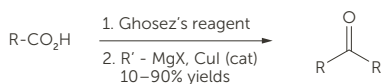
## CONVERSION OF ALKYL ALCOHOLS TO ALKYL CHLORIDES



$R = \text{alkyl, allylic, menthyl, ring ethers, lactones, propargyl, steroidal}$

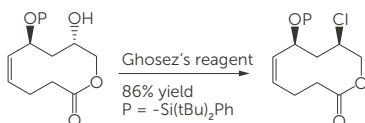
56 – 99% yields

## CONVERSION OF CARBOXYLIC ACIDS TO KETONES

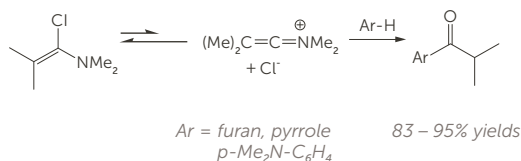


$R = \text{methyl 5-pentanoate, } nC_3H_7, Cy, tBu, Ph, 4\text{-Cl-C}_6\text{H}_4, p\text{-CN-C}_6\text{H}_4, 2\text{-furanyl}, CH=CHMe$

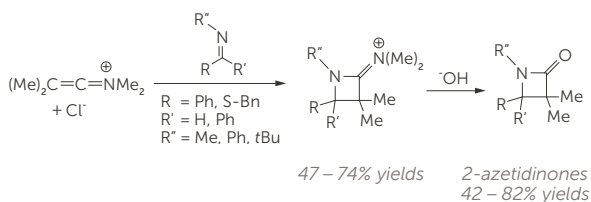
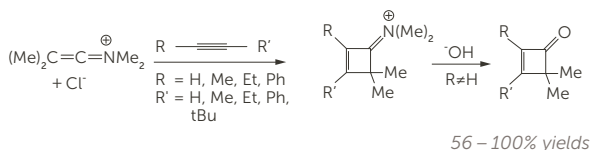
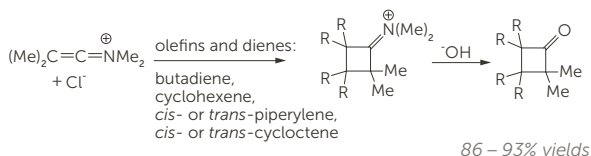
$R' = nBu, CH_2CH_2Ph, sec\text{-Bu}, tBu$



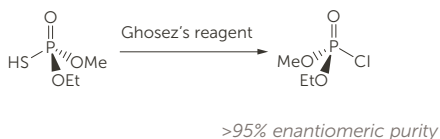
## AMINOALKENYLATION OF AROMATICS TO KETONES



## FORMATION OF 4-MEMBERED RINGS



## HALOGENATION OF PHOSPHOROTHIOIC ACID



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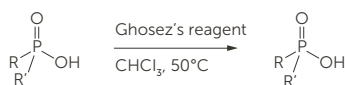
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## PHOSPHORUS OXYACIDS TO CHLORO ANALOGS



*R = Me, iPr, O-Bn, O-Ph*      57 – 95% yields  
*R' = OH, Me, O-Et, O-Bn, O-nBu, O-neopentyl, O-menthyl*

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