

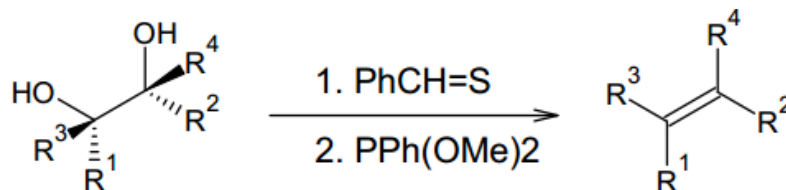
DBoreA Olefination

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Abstract: *There DBoreA Olefination is the transformation of 1, 2-diols into alkenes via the cis- (or syn-) elimination of cyclic thioncarbonate in the presence of dimethoxy or diethoxyphenylphosphite. The intermediate cyclic thioncarbonate is prepared from the reaction of 1, 2-diols with either benzenecarbothialdehyde one hand, it is assumed that the DBoreA Olefination proceeds via the attack of phosphite on sulfur, leading to an unstable carbene, which reacts with another phosphite to exclude carbon dioxide and produce the olefin. On the other hand, the reaction has also been claimed to undergo a concerted, cyclo-elimination mechanism.*

Keywords: Dimethoxy or diethoxyphenylphosphite, benzenecarbothialdehyde, Alkene's, 1, 2-Diols, Corey-Winter Reaction, Inert atmosphere, Heating organic letters

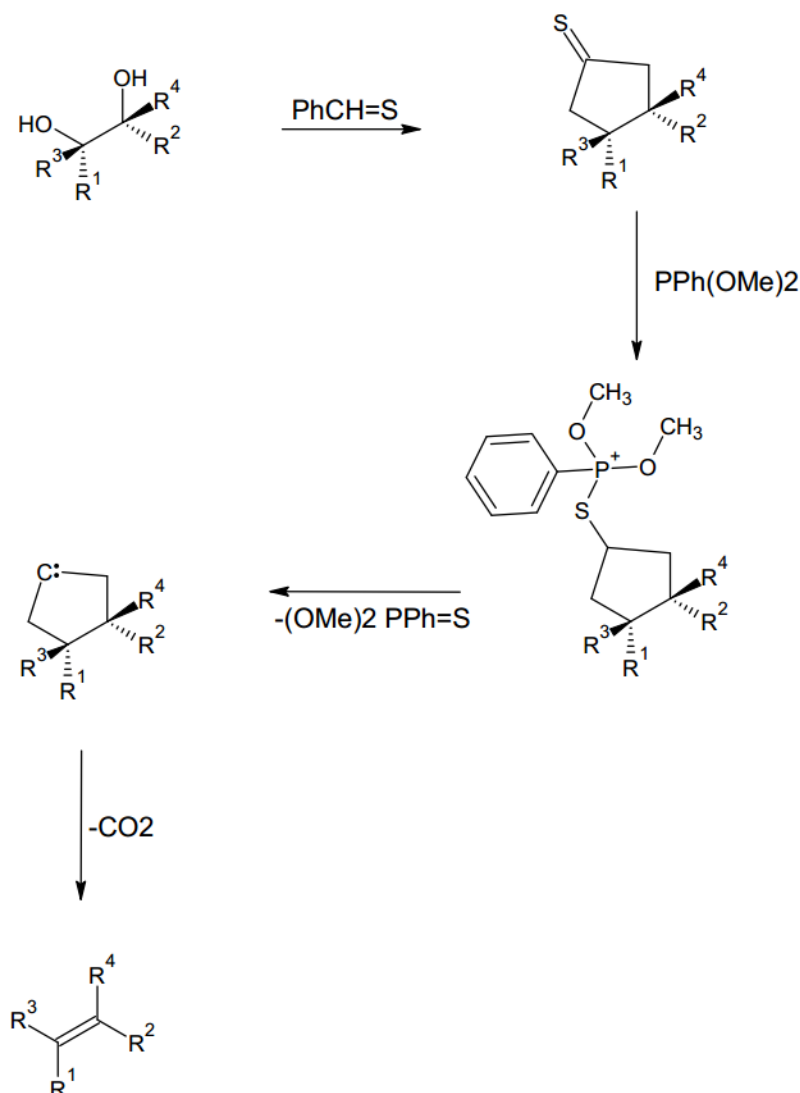
Reaction



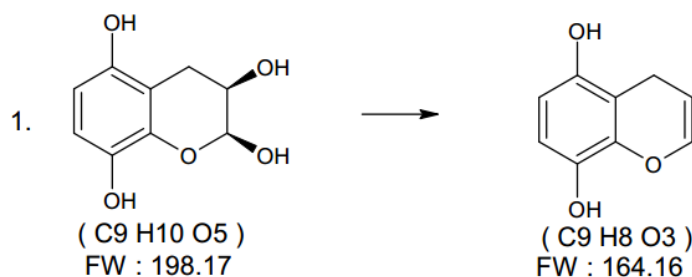
Theory

Synthesis of alkenes from 1, 2-diols through the formation of a benzenecarbothialdehyde followed by dimethoxy or diethoxyphenylphosphite.

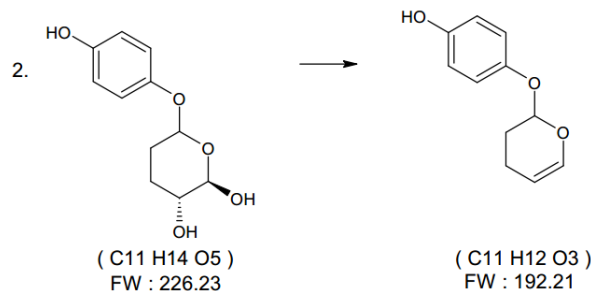
Mechanism



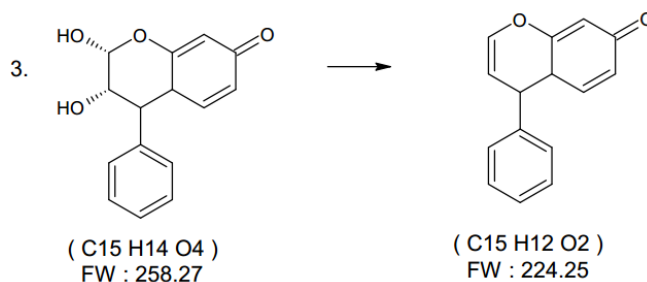
Applications



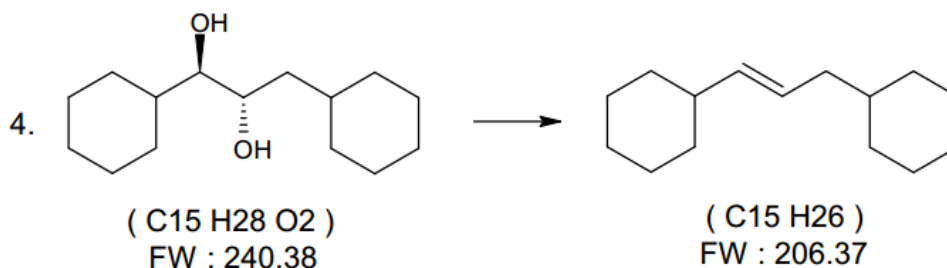
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=110 C; 11 h; inert atmosphere.



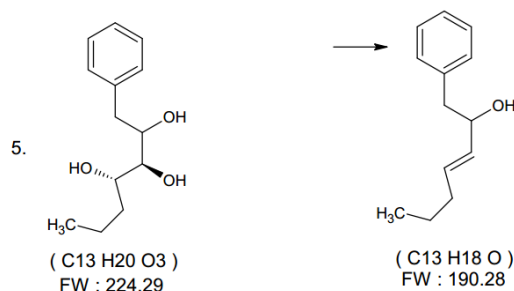
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=160 C; 24 h; inert atmosphere.



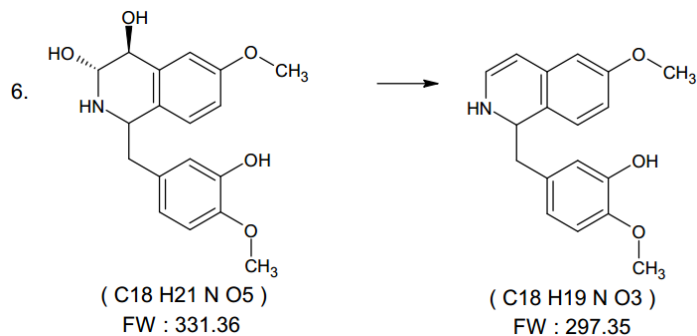
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=112 C; 3.88%; P 799-803; heating organic letters.



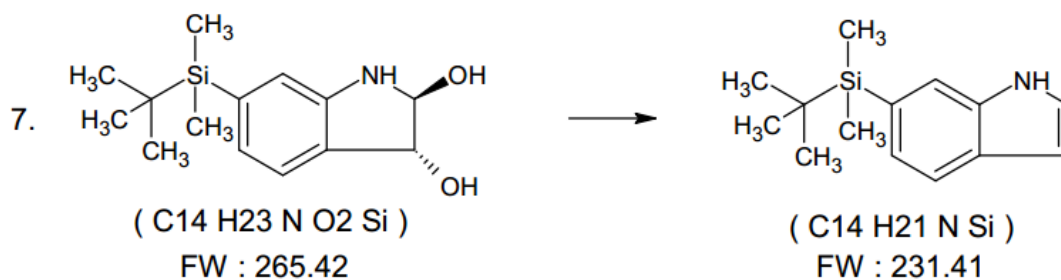
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=78 (-) -30 C; 2 h; heating organic letters.



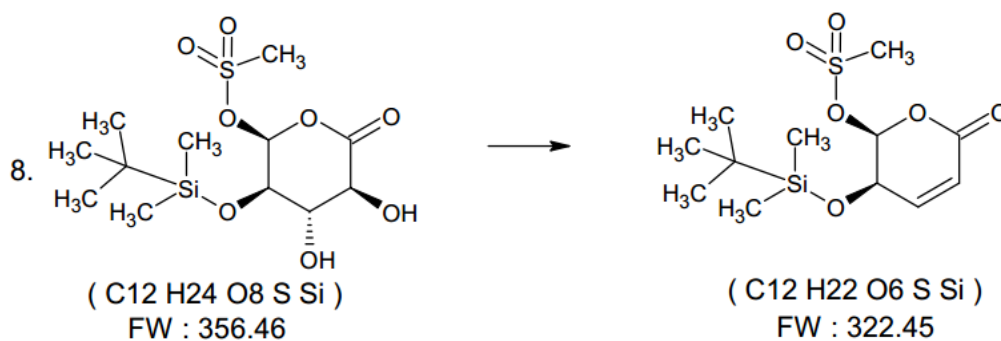
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=120 C; 24 h; heating organic letters.



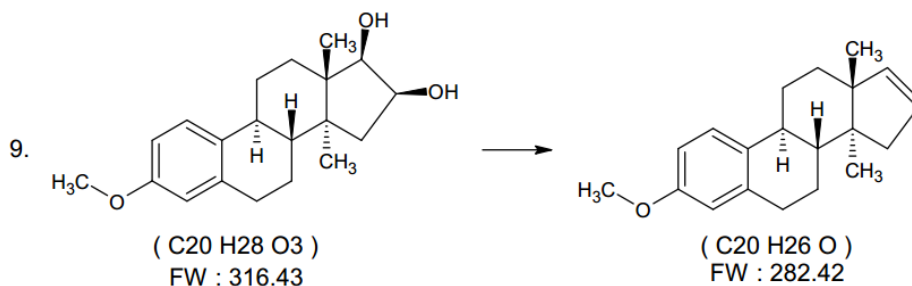
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=120 C; 15 h; heating organic letters



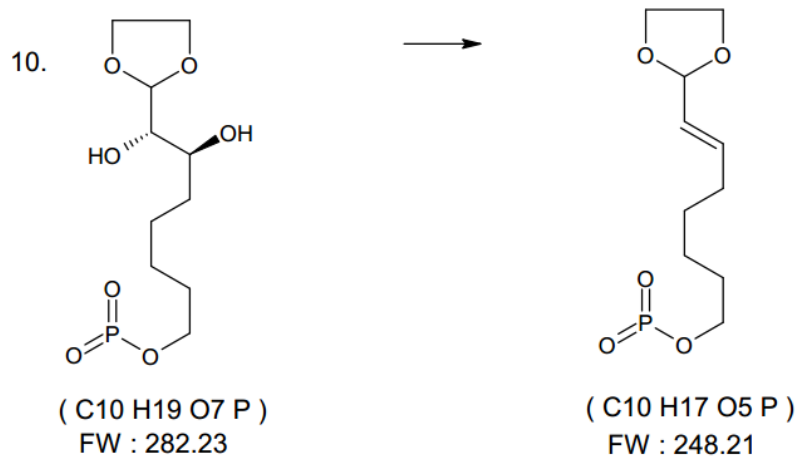
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=140 C; 20 h; heating organic letters.



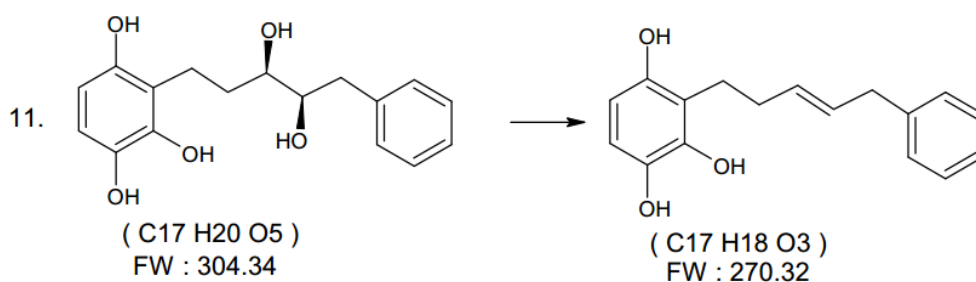
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=110 C; 23 h; heating organic letters.



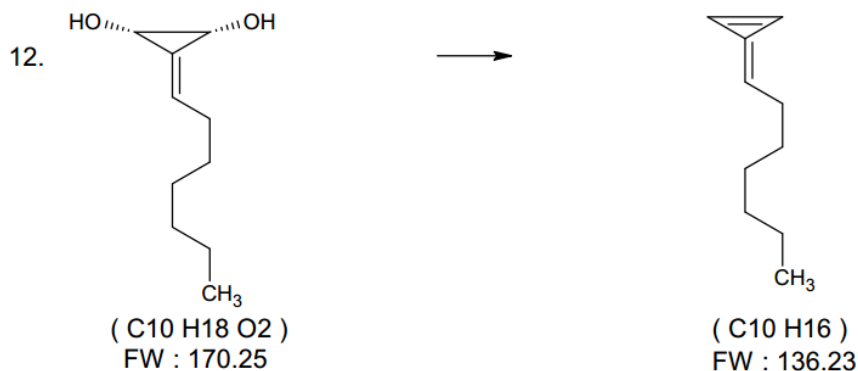
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=120 C; 24 h; heating organic letters.



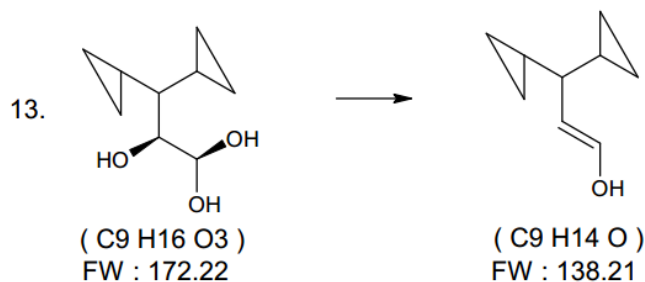
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=120 C; 12 h; heating organic letters.



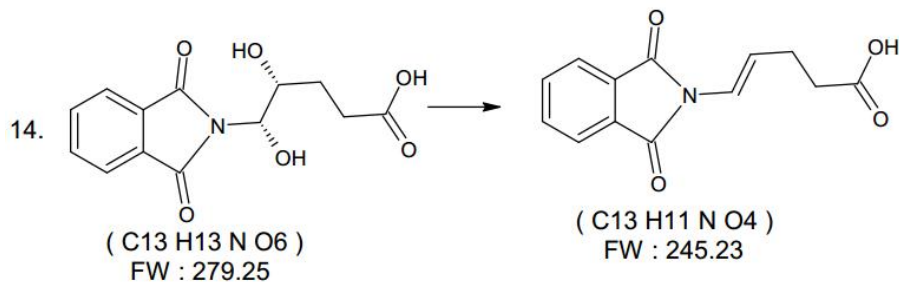
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=110 C; 14 h; heating organic letters.



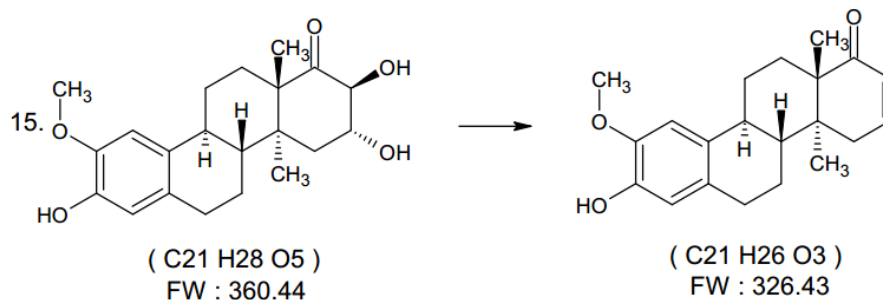
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=160 C; 24 h; heating organic letters.



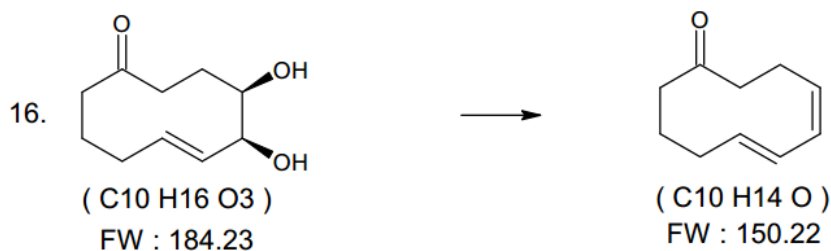
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=120 C; 24 h; heating organic letters.



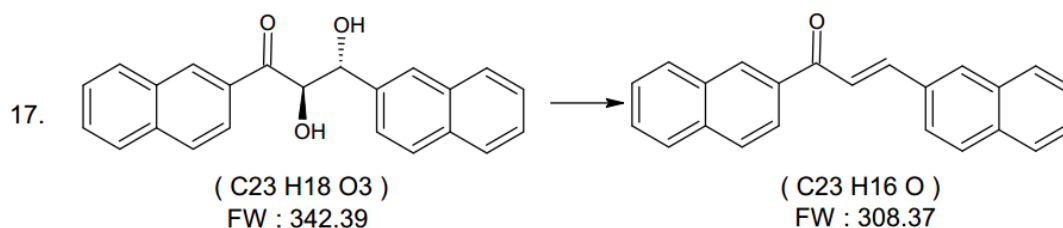
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=110 C; Corey-winter reaction; 12 h; heating organic letters.



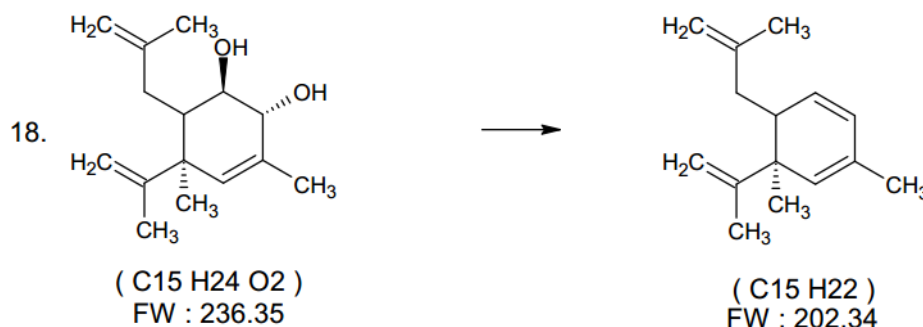
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=120 C; 12 h; heating organic letters.



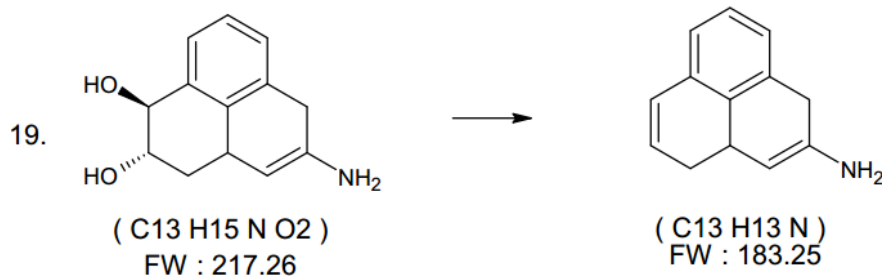
Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=110 C; 14 h; heating organic letters.



Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=120 C; 24 h; heating organic letters.



Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=120 C; 14.5 h; heating organic letters.



Synthesis of alkenes from 1, 2-diols through the formation of a PhCH=S followed by PPh (OMe) 2; T=120 C; 12 h; heating organic letters.

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