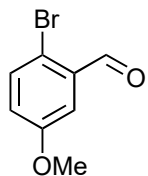
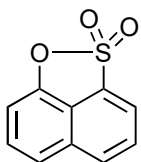


Total Syntheses of Dalesconol A and B

S. Snyder, T. Sherwood, A. Ross, *Angew. Chem. Int. Ed.* **2010**, *49*, 5146–5150.



1-5



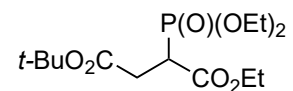
6-10



- 1) DBU, LiCl, **A**
- 2) TFA/ H₂O, Ac₂O, NaOAc
- 3) H₂, Pd/C, NaOMe
- 4) NaH, BnBr
- 5) PDBBA

Which variant of the HWE reaction represents step 5? What is the role of LiCl?

A

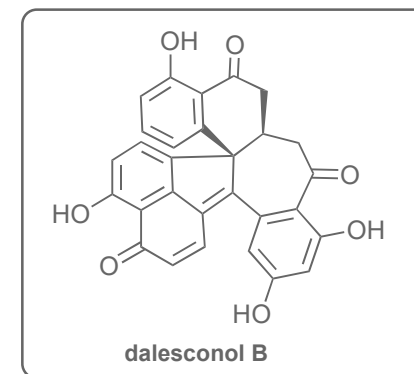


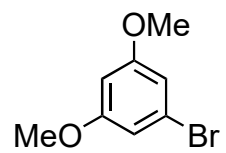
Hint step 5: PDBBA can be prepared by admixing DIBAL-H with KO^t-Bu.

What is the advantage over DIBAL-H?

- 6) NaOH, KOH, 210 °C
- 7) NaH, Me₂SO₄
- 8) NBS
- 9) NaH, MOMCl
- 10) *n*-BuLi, DMF

Name the reaction in step 6?

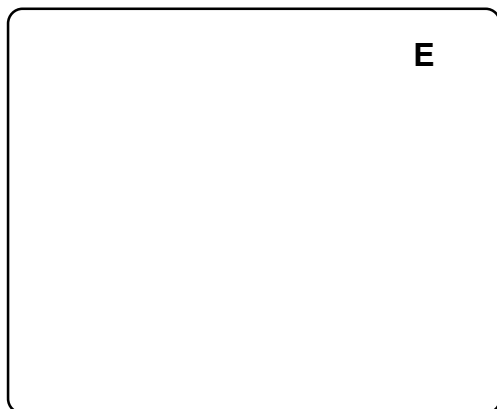




12-14



15-16

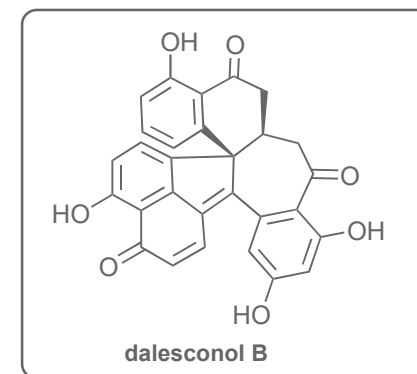


- 12) POCl₃, DMF
12) NaBH₄
13) PBr₃
14) KHMDS, HP(O)(OEt)₂

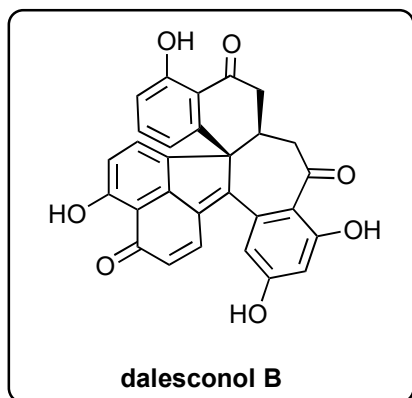
- 15) KO^t-Bu, then **B**
16) *n*-BuLi, then **C**

Name the reaction in step 12?

Name the reaction in step 15?



17-24



- 17) H_2 , Pd/C; TFA; $\text{PhI}(\text{OAc})_2$
- 18) Pd/C, H_2
- 19) HCl, THF
- 20) DDQ; BBr_3
- 21) KHMDS, MOMCl
- 22) $\text{Pd}(\text{OAc})_2$, *t*-BuOOH
- 23) DMP
- 24) BBr_3

Provide a mechanism for step 17

Step 22: Under these conditions usually hydroperoxides or ketones are formed: please come up with a mechanism