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DBore Reduction

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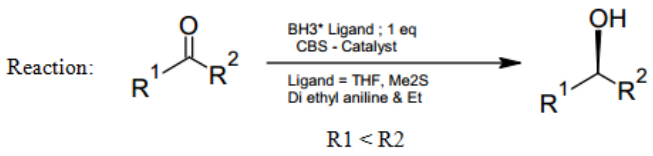
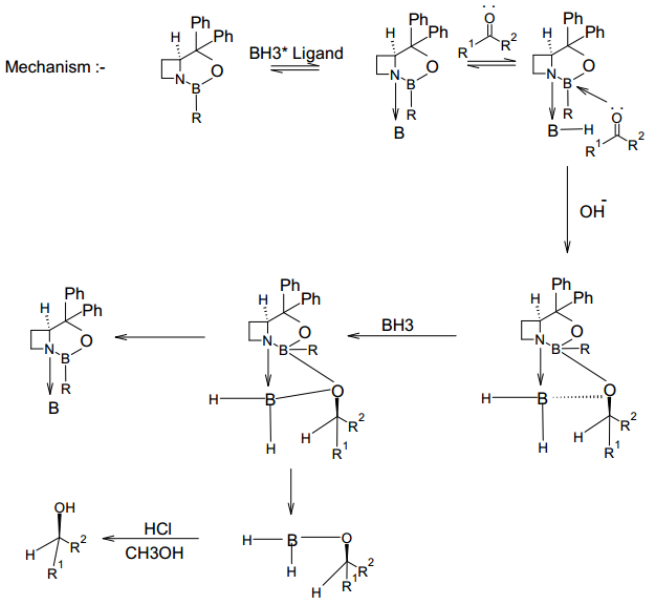
Abstract: ***Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* ligand, 1 eq, CBS - catalyst (Ligand=THF, Me2S), di ethyl anilne and Et.***

Keywords: 6-amino-2-benzofuran-1(3H)-one, 3-amino-2-(4-methoxy-2), (2E)-2-octenal, Benzophenone, 2,5-di methyl-2-cyclopenten-1-one, Apocynin, 2-bromo-4,6-di hydroxyben-1,2-aldehyde, 4-[(methyl thio methyl)] benzoic acid, Quinoline 3,4-di hydro-6-hydoxy, Cyclo propyl phenyl ketone

Reaction

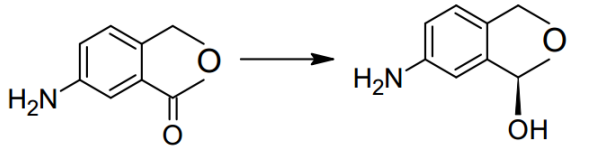


Theory: Enantio selective reduction of ketone's to produce chiral racemic alcohol's.



Applications:

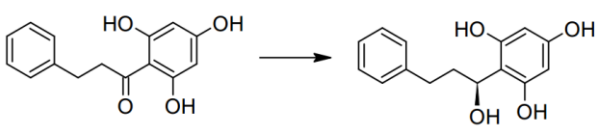
1.



(C8 H7 N O2) (C8 H9 O2 N)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = -95 (-) -75 C; 2h

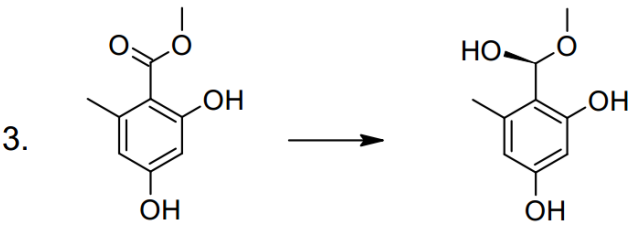
2.



(C15 H14 O4) (C15 H16 O4)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = -95 (-) -75 C; 2.5h

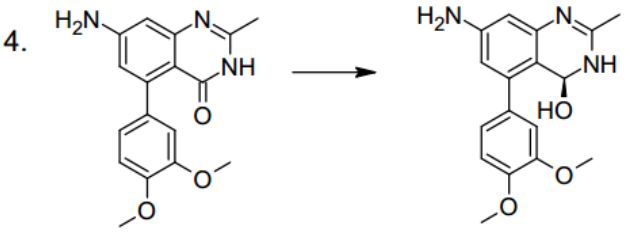
3.



(C9 H10 O4) (C9 H12 O4)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = -95 (-) -75 C; 2h

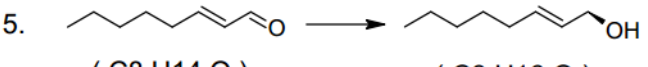
4.



(C15 H16 O3 N3) (C15 H18 O3 N3)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = -95 (-) -75 C; 5h

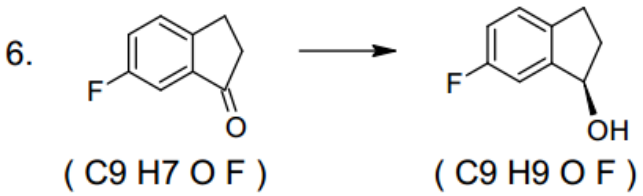
5.



(C8 H14 O) (C8 H16 O)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = -42 C; 2h

6.



(C9 H7 O F) (C9 H9 O F)

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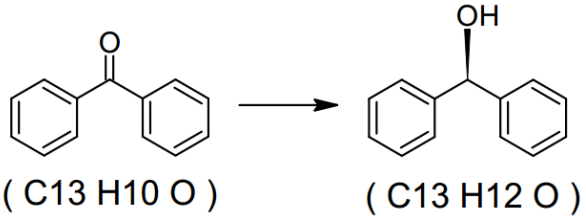
Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = -50 C; 1.5h

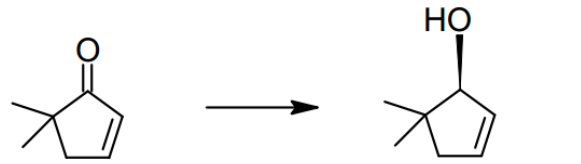
7.



(C13 H10 O) (C13 H12 O)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = 0 C; 2h

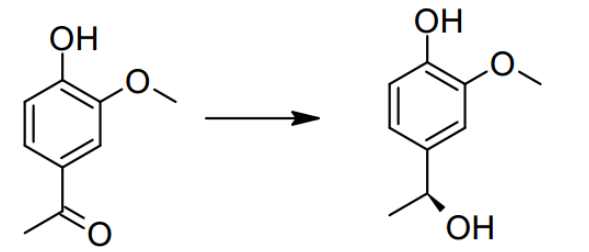
8.



(C7 H10 O) (C7 H12 O)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = -20 C; 3h

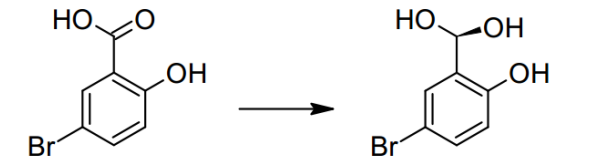
9.



(C9 H10 O3) (C9 H12 O3)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = 0 C; 2h

10.



(C7 H5 O3 Br) (C7 H7 O3 Br)

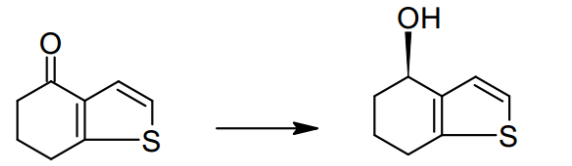
Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = 22 C; 7h

11.

(C10 H10 O) (C10 H12 O)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = 20 C; 2h

12.



(C8 H8 O S) (C8 H10 O S)

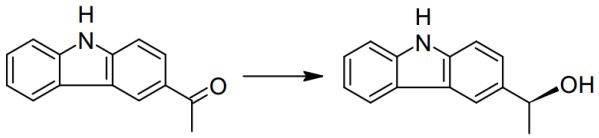
Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = 23 C; 4h

13.

(C6 H6 O2 S) (C6 H8 O2 S)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = 20 C; 3h

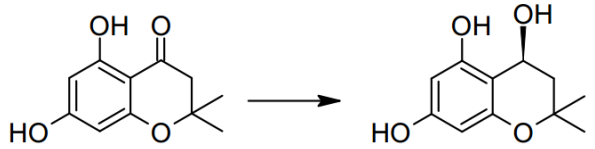
14.



(C14 H11 O N) (C14 H13 O N)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = 14 C; 16h

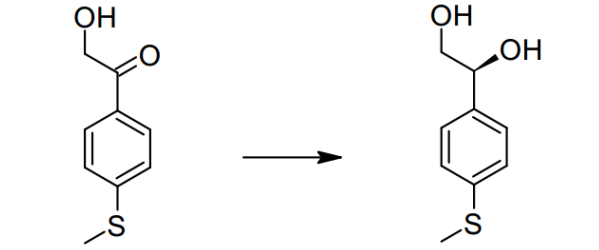
15.



(C11 H12 O4) (C11 H14 O4)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = -95 - (-) - 75 C; 2h

16.



(C9 H10 O2 S) (C9 H12 O2 S)

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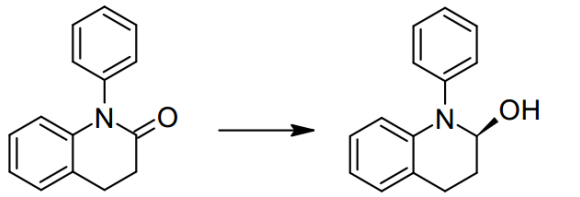
Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = - 45 C; 4h

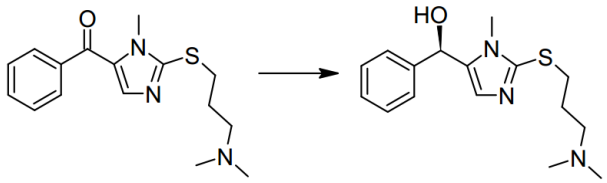
17.



(C15 H13 O N) (C15 H15 O N)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = - 78 C; 3h

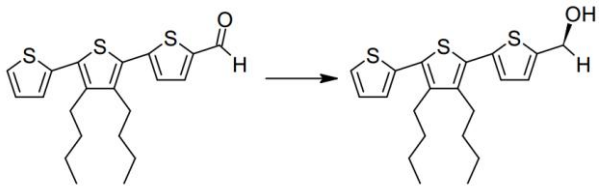
18.



(C16 H21 N3 S) (C15 H23 N3 S)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = 24 C; 2h; 760.051 Torr

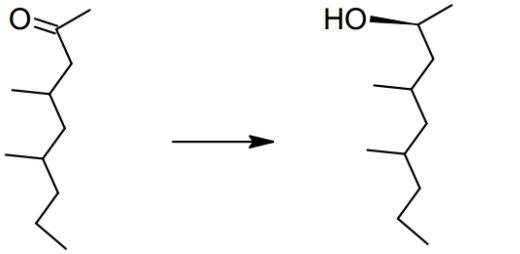
19.



(C21 H24 O S3) (C21 H26 O S3)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = - 45 C; 4h

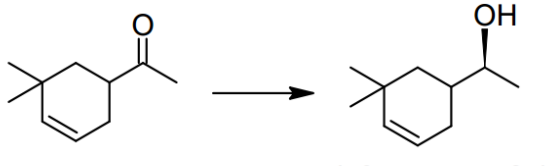
20.



(C11 H22 O) (C11 H24 O)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = - 45 C; 2h

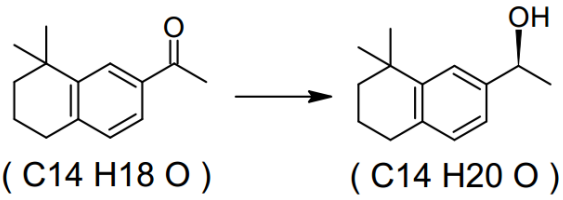
21.



(C10 H15 O) (C10 H17 O)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = 0 C; 5h

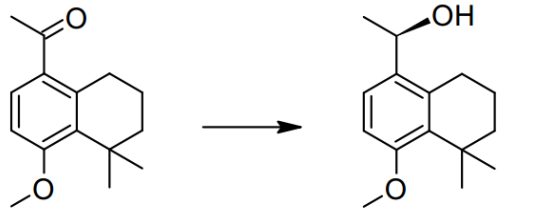
22.



(C14 H18 O) (C14 H20 O)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = - 95 - (-) - 78 C; 5h

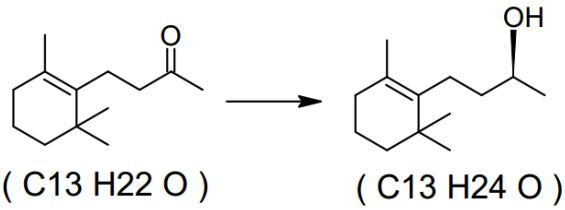
23.



(C15 H20 O2) (C15 H22 O2)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = - 23 C; 2h

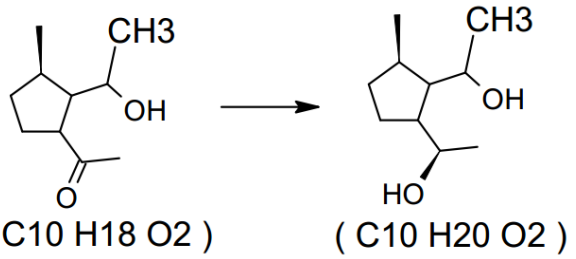
24.



(C13 H22 O) (C13 H24 O)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's in the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T = -95 - (-) - 78 C; 3h

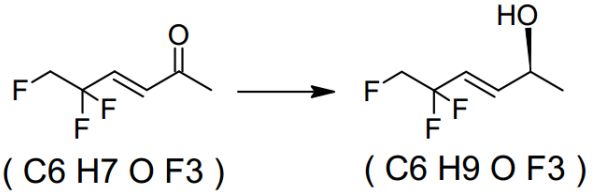
25.



(C10 H18 O2) (C10 H20 O2)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T= 18 C; 3h

26.



(C6 H7 O F3) (C6 H9 O F3)

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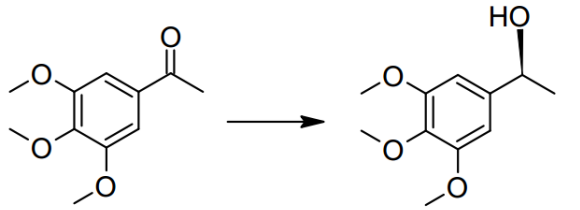
Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T= -10 C; 4h

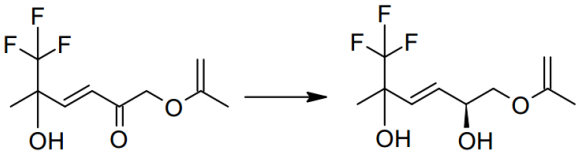
27.



(C11 H14 O4) (C11 H16 O4)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; at T= -10 C; 4h

28.



(C10 H13 O3 F3) (C10 H15 O3 F3)

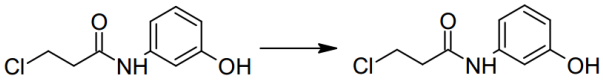
Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; R1 < R2; 91 %

29.

(C7 H7 O3 Cl) (C7 H9 O3 Cl)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; R1 < R2; at T = -9 C; 4h

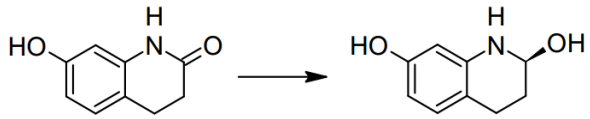
30.



(C9 H10 O N Cl) (C9 H12 O N Cl)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; R1 < R2; at T = -10 C; 4h

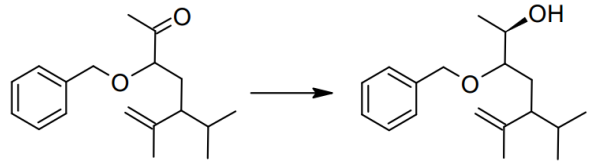
31.



(C9 H9 O2 N) (C9 H11 O2 N)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; R1 < R2; at T = -10 C; 4h; 93%

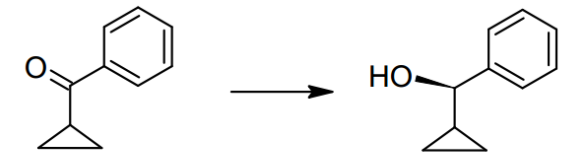
32.



(C17 H24 O2) (C17 H26 O2)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; R1; at T = -13 C; 15h

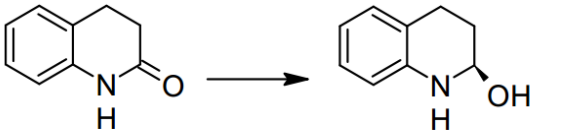
33.



(C10 H10 O) (C10 H12 O)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; R1; at T = -10 C; 5h

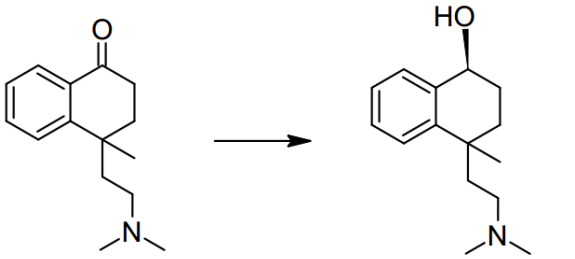
34.



(C9 H9 O N) (C9 H11 O N)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; R1; at T = -10 C; 4h

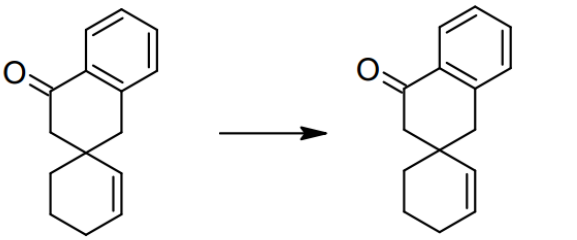
35.



(C15 H 21 O N) (C15 H23 O N)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; R1; at T = -14 C; 16h

36.



(C15 H16 O) (C15 H18 O)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; R1; at T = -11 C; 5h

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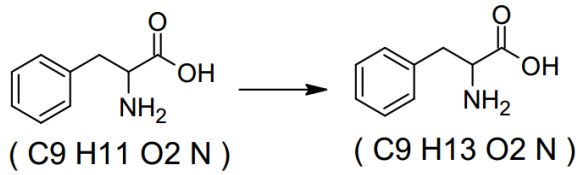
37. 

(C9 H11 O2 N) (C9 H13 O2 N)

Enantio selective reduction of ketone's to produce chiral racemic alcohol's n the presence of BH3* Ligand, 1 eq and CBS - Catalyst; R1; at T = -10 C; 4h

References

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