

Laccase/TEMPO

dibenzylcompound

yield: 95%

Material	(Non)volatile [mg]	(Non)volatile [E]	Solvent [mL]
<u>Starting Materials</u>			
substrate 1a	100.0		
O ₂	12.8	0.112	
laccase from <i>T. versicolor</i>	11.6	0.176	
TEMPO	10.6	0.161	
tris buffer	17.4	2.642	
water			7.2
<u>By-Products</u>			
Benzaldehyde		0.517	
Remaining diBenzylcompound + other		0.080	
<u>Auxiliaries (work-up)</u>			
Na ₂ SO ₄	375.0	5.680	
NaOH	800.0	12.117	
Dichloromethane			30.0

E factor:	
reaction	3.7
work-up	17.8
purification	<i>na</i>
total	21.5

Hydrogenation

dibenzylcompound

yield: 27%

Material	(Non)volatile [mg]	(Non)volatile [E]	Solvent [mL]
<i>Starting Materials</i>			
dibenzylcompound	100.0		
H ₂	0.7	0.001	
Pd/C	3.4	0.180	
MeOH			3.39
<i>By-Products</i>			
Toluene		0.449	
remaining dibenzylcompound + others		3.917	
<i>Auxiliaries (work-up)</i>			
Celite	10700.0	569.420	
Silica gel	10000.0	532.169	
MeOH			10.00
n-Hexane			25.00
EtOAc			225.00

E factor:	
reaction	4.5
work-up	1101.6
purification	<i>na</i>
total	1106.1

DIAD**dibenzylcompound**

yield: 80%

Material	(Non)volatile [mg]	(Non)volatile [E]	Solvent [mL]
<i><u>Starting Materials</u></i>			
dibenzylcompound	50.0		
DIAD	40.0	0.234	
water	36.0	0.020	2.4
HCl conc (37% aq)		5.320	0.1
THF			2.0
<i><u>By-Products</u></i>			
Benzaldehyde		0.517	
DIHD		0.995	
remaining dibenzylcompound + other		0.628	
<i><u>Auxiliaries (work-up)</u></i>			
NaOH	240.000	8.646	
Na ₂ SO ₄	125.0	4.504	
Silica gel	100.0	360.277	
CH ₂ Cl ₂			10.0
n-Hexane			25.0
EtOAc			225.0

E factor:	
reaction	7.7
work-up	373.4
purification	<i>na</i>
total	381.1