|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Entry** | **Catalyst** | **Solvent** | **Yield[a] (%)** | **d.r.[c]** | **ee[d] (%)** |
| 1 | C1 | DCM | 81 | >20:1 | 94 |
| 2 | C2 | DCM | 82 | 12:1 | 90 |
| 3 | C3 | DCM | 30 | 9:1 | 0 |
| 4 | C4 | DCM | 78 | >20:1 | 71 |
| 5 | C5 | DCM | 85 | >20:1 | 94 |
| 6 | C6 | DCM | 70 | 12:1 | 93 |
| 7 | C5 | Toluene | 79 | >20:1 | 95 |
| 8 | C5 | THF | 73 | 15:1 | 89 |
| 9 | C5 | CHCl3 | 71 | >20:1 | 93 |
| 10 | C5 | DCE | 81 | 18:1 | 91 |
| 11 | C5 | Et2O | 88 (83[b]) | >20:1 | 98 |

[a] The yields were determined by 1H NMR analysis of crude product using 4-iodoanisole as the internal standard.

[b] Isolated yield.

[c] Ratio is determined by 1H NMR.

[d] Determined by chiral HPLC.