Supporting Information for

Indium Mediated Reductive Elimination of Halohydrins

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Tri-*O*-acetyl-D-glucal
Tri-*O*-acetyl-D-galactal

References

Olefins 2

(*E*)-1-Phenyl-1,3-butadiene^{S1} (entry 1)

¹H NMR (300 MHz, CDCl₃) δ 7.43-7.20 (m, 5H), 6.83-6.69 (m, 1H), 6.59-6.44 (m, 1H), 6.59-6.44 (m, 2H), 5.33 (d, 1H, *J* = 16.6 Hz), 5.17 (d, 1H, *J* = 10.0 Hz); ¹³C NMR (75 MHz, CDCl₃) δ 137.6, 137.5, 133.3, 132.6, 132.5, 130.0, 126.0, 128.9, 126.9, 118.1

1,2-Di-1,3-butadienyl-benzene^{S2} (entry 2)

¹H NMR (300 MHz, CDCl₃) δ 7.48-7.42 (m, 2H), 7.23-7.16 (m, 2H), 6.86 (d, 2H, *J* = 15.07 Hz), 6.69-6.47 (m, 4H), 5.35-5.30 (d, 2H, *J* = 15.3 Hz), 5.20-5.16 (d, 2H, *J* = 8.9 Hz); ¹³C NMR (75 MHz, CDCl₃) δ 137.8, 135.9, 132.46, 131.5, 132.2, 128.1, 126.7, 126.0, 125.9, 118.32 MS (EI) *m/z* (rel intensity) 182 (*M*⁺, 3), 167 (32), 140 (41), 111 (41), 71 (100), 57 (84). HRMS (EI) *m/z* 182.1069 (calcd for C₁₄H₁₄ 182.1096).

***trans*-Stilbene** (entries 3,4,8 and 9)

¹H NMR (300 MHz, CDCl₃) δ 7.52 (d, 4H), 7.39-7.23 (m, 6H), 7.11 (s, 2H).; identical with an authentic sample.^{S3}

Cinnamyl alcohol (entry 5)

¹H NMR (300 MHz, CDCl₃) δ 7.41-7.24 (m, 5H), 6.61 (d, 1H), 6.37 (dt, 1H), 4.32 (d, 2H), 1.61(-OH).; identical with an authentic sample.^{S4}

Ethyl cinnamate (entry 6)

¹H NMR (300 MHz, CDCl₃) δ 7.69 (d, 1H, *J* = 16 Hz), 7.50 (m, 2H), 7.36 (m, 3H), 6.43 (d, 1H, *J* = 16 Hz), 4.26 (q, 2H), 1.33 (t, 3H).; identical with an authentic sample.^{S5}

Styrene (entry 7)

¹H NMR (300 MHz, CDCl₃) δ 7.36 (m, 2H), 7.25 (m, 3H), 6.7 (dd, 1H), 5.7 (d, 1H), 5.20 (d, 1H).; identical with an authentic sample.^{S6}

Cyclohexene (entry 10)

^1H NMR (300 MHz, CDCl_3) δ 5.68 (m, 2H), 1.98 (m, 4H), 1.6 (m, 4H).; identical with an authentic sample.^{S3}

Ethyl crotonate (entry 11)

¹H NMR (300 MHz, CDCl₃) δ 7.20-6.90 (m, 1H), 5.85 (dq, 1H), 4.16 (q, 2H, J = 7.0 Hz), 1.88 (dd, CH₃), 1.31 (t, 3H, J = 7.0 Hz).; identical with an authentic sample.^{S7}

Indene (entry 12, 13, 14 and 15)

¹H NMR (300 MHz, CDCl₃) δ 7.46 (dd, 2H), 7.24(dt, 2H), 6.88(m, 1H), 6.55(m, 1H) 3.40(s, 2H).; identical with an authentic sample.^{S8}

Tri-*O*-acetyl-D-glucal (entry 16)

To 10 g(25.5 mmol) of penta-*O*-acetyl- β -D-glucopyranose, 25 mL of 30% HBr/AcOH solution and 5 mL of acetic anhydride are added at 0°C and then the reaction mixture is stirred at room temperature for 2h. 100 ml of dichloromethane are added and the solution is poured onto 150 mL of ice-water. The phases are separated and the aqueous phase is twice extracted with dichloromethane. The organic phases are combined and carefully neutralized with saturated sodium hydrogen carbonate solution, washed with water and dried over anhyd. MgSO₄. After filtration and evaporation of the solvent at low temperature, the residue is dissolved in a minimum amount of diethyl ether and crystallized by addition of light petroleum ether. 9.6 g of (92%) of the product obtained in form of colorless crystals. And this compound was added to a suspension of Pd(PPh₃)₄/In/InCl₃ and the resultant reaction mixture was stirred vigorously at low temperature for 8 h. The solvent was removed under reduced pressure to provide tri-*O*-acetyl-D-glucal as a white solid free of impurities as judged from its ¹H NMR spectrum. Spectroscopic data obtained were in accord with that in the literature.^{S9}

Tri-*O*-acetyl-D-galactal (entry 17)

Spectroscopic data obtained were in accord with that in the literature.^{S9}

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