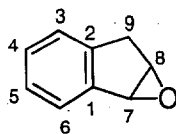


Data for Indene Oxide:



Following General Procedure II from 116 mg (1.0 mmol) of indene, 81.6 mmol (0.3 mmol) of (-)-**6**, 2.46 g (4.0 mmol) of Oxone and 1.66 g (12.0 mmol) of K_2CO_3 was obtained 88.5 mg (67%) of epoxide after bulb-to-bulb distillation.

bp: 100 °C (2.0 mmHg, ABT)

1H NMR: (400 MHz)

7.50 (d, $J = 7.2$, 1 H, H-Aryl), 7.27-7.17 (m, 3 H, H-Aryl), 4.28 (m, 1 H, HC(9)), 4.14 (t, $J = 2.8$, 1 H, HC(8)), 3.22 (d, $J = 17.6$, 1 H, HC(7)), 2.98 (dd, $J = 18.0, 2.8$, 1 H, HC(7))

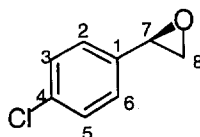
Rotation: $[\alpha]_D^{24}$ 6.4 ($c = 0.96$, $CHCl_3$)

GC: 8.1 min (HP-5, 130 °C, 25 psi)

HPLC: t_R (minor), 18.4 min (44%); t_R (major), 20.9 min (56%); (Chiralcel OJ, 10% *i*-PrOH in hexane, 0.5 mL/min))

TLC: R_f 0.19 (hexane/EtOAc, 15/1)

Data for (1R)-4-(Chlorophenyl)oxirane⁴:



Following General Procedure II from 139 mg (1.0 mmol) of 4-chlorosytrene 81.7 mg (0.3 mmol) of (-)-**6**, 2.46 g (4.0 mmol) of Oxone and 1.66 g (12.0 mmol) of K_2CO_3 was obtained 84.6 mg (55%) of epoxide as a clear, colorless oil after bulb-to-bulb distillation.

bp: 110 °C (3.0 mmHg, ABT)

¹H NMR: (400 MHz)

7.32 (d, $J = 8.4$, 2 H, HC(3,5)), 7.21 (d, $J = 8.4$, 2 H, HC(2,6)), 3.84 (dd, $J = 4.0$, 2.4, 1 H, HC(7)), 3.15 (dd, $J = 5.6$, 4.0, 1 H, HC(8)), 2.76 (dd, $J = 5.6$, 2.6, 1 H, HC(8))

Rotation: $[\alpha]_D^{25} -10.4$ ($c = 1.63$, CHCl₃)

GC: 9.0 min (HP-5, 130 °C, 25 psi)

Chiral GC: t_R (R), 38.6 min (71.5%); t_R (S), 41.0 min (28.5%); (JW-BPA, 85 °C, 15 psi)

References

- (1) Witkop, B.; Foltz, C. M. *J. Am. Chem. Soc.* **1957**, *79*, 197.
- (2) Chang, H-T.; Sharpless, K. B. *J. Org. Chem.* **1996**, *61*, 6456.
- (3) Denmark, S. E.; Forbes, D. C.; Hay, D. S.; DePue, J. S.; Wilde, R. G. *J. Org. Chem.* **1995**, *60*, 1391.
- (4) Pedragosa-Moreau, S.; Morisseau, C.; Zylber, J.; Archelas, A.; Baratti, J.; Furstoss, R. *J. Org. Chem.* **1996**, *61*, 7402.
- (5) Brandes, B. D.; Jacobsen, E. N. *J. Org. Chem.* **1994**, *59*, 4378.
- (6) (a) Atkinson, E. R.; Lawler, H. J. In *Org. Synth. Coll. Vol. I*; John Wiley and Sons: New York, p. 222. (b) Bell, F. *J. Chem. Soc.* **1934**, 835. (c) Mislow, K.; Glass, M. A. W.; O'Brien, R. E.; Rutkin, P.; Steinberg, D. H.; Weiss, J.; Djerassi, C. *J. Am. Chem. Soc.* **1962**, *84*, 1455. (d) Bergmann, E. D.; Pelchowicz, Z. *J. Am. Chem. Soc.* **1953**, *75*, 2663. (e) Newman, P.; Rutkin, P.; Mislow, K. *J. Am. Chem. Soc.* **1958**, *80*, 465.