

Stereoselective synthesis of substituted 2,5-diazabicyclo[2.2.1]heptanes by iodine-mediated cyclization of optically pure compounds containing the 4,5-diamino-1,7-octadiene and 1,2-diamino-4-alkene moieties, *Tetrahedron*, Volume 63, Issue 50, 2007, Pages 12446-12453, ISSN 0040-4020,

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Abstract: 3,7-endo-Disubstituted 2,5-diazabicyclo[2.2.1]heptanes were obtained by iodo-cyclization of N,N'-di[(S)-1-phenylethyl]-(E,E)-4,5-diamino-1,8-diphenyl-1,7-octadiene and substituted N,N'-di[(S)-1-phenylethyl]-1,2-diamino-4-alkenes. Removal of only one N-substituent of the bridged piperazines was achieved by reduction with ammonium formate and Pd/C. Unexpected cleavage of the skeleton of vinyl-substituted bridged piperazines was observed using hydrogen, leading to substituted 3-aminopyrrolidines.

Keywords: Alkenes; Cyclization; 1,2-Diamines; Iodine; Nitrogen heterocycles; Piperazines