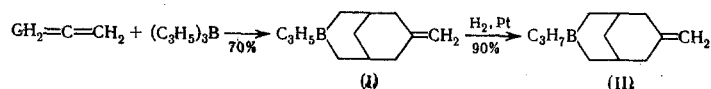


1-BOROTRICYCLO[3.3.1.1^{3,7}]DECANE PYRIDINATE

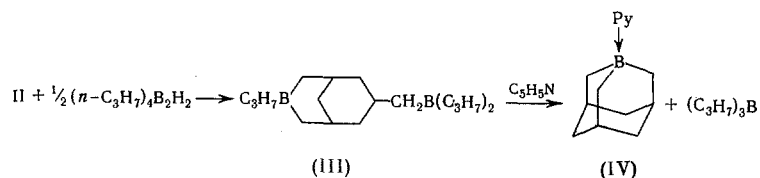
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UDC 542.91:547.1'127

3-Allyl-7-methylene-3-borobicyclo[3.3.1]nonane (I) with bp 38-39° (1 mm) and n_D^{20} 1.5012 is formed by heating allene and triallylborane in an autoclave at 150° for 6 h. Hydrogenation of I over Pt black leads to 3-n-propyl-7-methylene-3-borobicyclo[3.3.1]nonane (II) with bp 50-51° (1 mm) and n_D^{20} 1.4884:



The action of tetra-n-propyldiborane on II yields 3-n-propyl-7-(di-n-propylboryl)methyl-3-borobicyclo[3.3.1]nonane (III), which, on addition of pyridine, is converted to tri-n-propylborane and 1-boro-tricyclo[3.3.1.1^{3,7}]decane pyridinate (IV) with mp 157-162°. Found %: C 79.05; H 9.50; B 5.04; N 6.42; mol. wt. 212. $\text{C}_{14}\text{H}_{20}\text{BN}$. Calculated %: C 78.88; H 9.46; B 5.07; N 6.57; mol. wt. 213.



The PMR spectrum contains multiplets centered at δ 0.72 (BCH_2), 1.59 (CH_2), and 2.14 ppm (CH), and signals characteristic for the pyridine protons at 7.34-8.69 ppm. The internal standard was CH_2Cl_2 (δ 5.30 ppm). The ^{11}B NMR spectrum contains a signal at +4.1 ppm with respect to $\text{BF}_3 \cdot \text{O}(\text{C}_2\text{H}_5)_2$.

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