

Title: **Preparation of Hydroisoquinolines (HIQs)**

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Date: January 2019

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The preparation of two tetrahydroisoquinolines (**9** and **10**) and two dihydroisoquinolines (**7** and **8**) has been attempted from ethyl 2-arylacetates as starting materials during this project.

In our synthetic scheme, the addition of methyl magnesium bromide to the ethyl 2-arylacetates afforded the corresponding tertiary alcohols (**1** and **4**). Those tertiary alcohols, were transformed into 2-chloroacetamides (**2** and **5**) by a Ritter reaction. Finally, the hydrolysis of the amides gave the desired amines (**3** and **6**).

The Pd(OAc)₂ catalyzed condensation of amines (**3** and **6**), with phenyl-vinyl sulfone, using Ag₂CO₃ as an oxidant, afforded the corresponding tetrahydroisoquinolines (**7** and **8**) in moderate yields which were difficult to purify. Further treatment with LDA finally gave the dihydroisoquinolines **9** and **10**.

Keywords: Tetrahydroisoquinolines, Dihydroisoquinolines, Phenylethylamine, phenyl vinyl sulfone, Ritter reaction.