

## Dynamic kinetic resolution of benzylic amines with palladium supported on dolomite and ionic liquids with microwave heating. A new approach.

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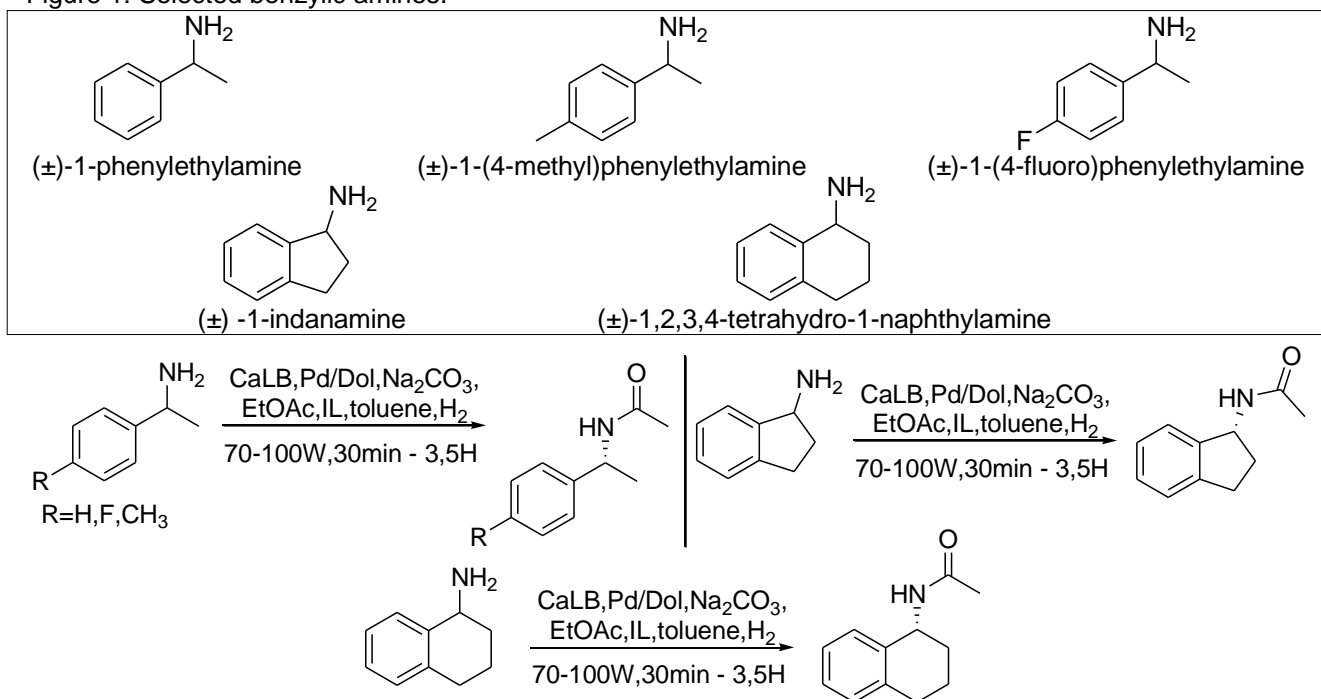
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### ABSTRACT

Chiral amines are important building blocks for organic synthesis because they are present in a wide number of drugs and compounds with remarkable biological activity<sup>1</sup>. Dynamic kinetic resolution (DKR) constitutes an efficient method to prepare amines in enantiomerically pure form, which can provide 100% theoretical yield of a single enantiomer<sup>1</sup>. Ionic liquids (ILs) are stable, non-volatile and low toxic<sup>2</sup>. ILs were chosen because they stabilize palladium nanoparticles, thus improving their catalytic activity<sup>2</sup>. Microwave irradiation improves Pd catalyst performance by rapidly heating the reaction mixture by directly exciting the molecules, accelerating the catalytic reactions<sup>1</sup>.

Figure 1: Selected benzylic amines.



Scheme 1: General procedure for DKR.

The conversion value of DKRs were between 60-100%, and yields ranged from 53-93%. These conditions can still be optimized. Furthermore, it was possible to reduce the reaction time from 24 h to up to 30 minutes. The results obtained demonstrated the efficiency of the Pd/Dol catalyst.

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### REFERENCES

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