

## Conventional vs Microwave Assisted Synthesis of Different Substituted Heterocyclic Amides

Pardeep Kaur<sup>1</sup>, Sunita Sharma\*<sup>2</sup>, Jyoti Gaba<sup>3</sup> and Rashmi<sup>4</sup>

<sup>1</sup>Department of Chemistry, Punjab Agricultural University, Ludhiana 141004

Email: [pardip2493@gmail.com](mailto:pardip2493@gmail.com)

<sup>2</sup>Department of Plant Breeding and Genetics, Punjab Agricultural University, Ludhiana 141004

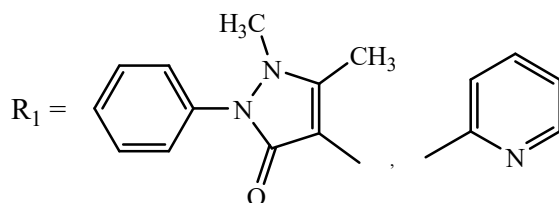
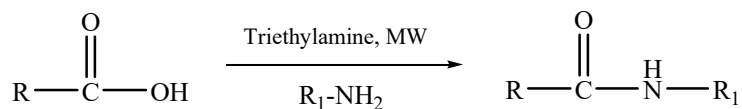
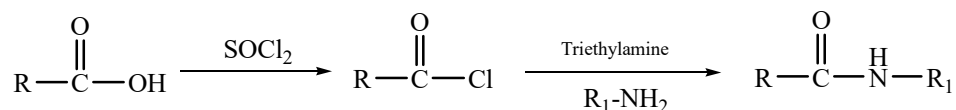
Email: [sunita\\_sharma@pau.edu](mailto:sunita_sharma@pau.edu)

<sup>3</sup>Department of Chemistry, Punjab Agricultural University, Ludhiana 141004

Email: [jyotgcw@gmail.com](mailto:jyotgcw@gmail.com)

<sup>4</sup>Department of Chemistry, Punjab Agricultural University, Ludhiana 141004

Email: [rashmibakshi280@gmail.com](mailto:rashmibakshi280@gmail.com)



1 R = -CH<sub>2</sub>OC<sub>6</sub>H<sub>5</sub>, R<sub>1</sub> = -C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>O

2 R = -CH<sub>2</sub>OC<sub>6</sub>H<sub>5</sub>, R<sub>1</sub> = -C<sub>6</sub>H<sub>7</sub>N

3 R = -CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>Cl, R<sub>1</sub> = -C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>O

4 R = -CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>Cl, R<sub>1</sub> = -C<sub>6</sub>H<sub>7</sub>N

5 R = -CCl<sub>3</sub>, R<sub>1</sub> = -C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>O

6 R = -CCl<sub>3</sub>, R<sub>1</sub> = -C<sub>6</sub>H<sub>7</sub>N

7 R = -CH<sub>2</sub>Cl, R<sub>1</sub> = -C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>O

8 R = -CH<sub>2</sub>Cl, R<sub>1</sub> = -C<sub>6</sub>H<sub>7</sub>N

9 R = -CH<sub>3</sub>, R<sub>1</sub> = -C<sub>12</sub>H<sub>14</sub>N<sub>2</sub>O

10 R = -CH<sub>3</sub>, R<sub>1</sub> = -C<sub>6</sub>H<sub>7</sub>N

### Abstract

Amides have great importance in the field of synthetic organic chemistry because of their presence in many biologically active molecules. Condensation of different carboxylic acids with different amines is one of the most convenient method for amide synthesis. Different substituted amides (1-10)

were synthesized by reacting different substituted acids with different substituted amines in the presence of catalytic amount of triethylamine in dichloromethane/ethanol. Synthesis of amides has been done using both conventional as well as microwave method. The yield of amides synthesized by microwave method was more as compared to conventional method and also took lesser time for the completion of reaction. The increase in yield of synthesized products fluctuated between 8-36%. Purity of the synthesized compounds was checked by thin layer chromatography technique. Physical data (yield, melting point, state and color) of the synthesized products was determined.

**Keywords:** Amides, 4-aminophenzone, 2-aminopyridine, microwave irradiation method