Synthesis, Characterization and Fungitoxicityof Substituted Benzimidazoles

Geetika Arora[1], Sunita Sharma[2]*and Jyoti Gaba[3]

[1]Department of Chemistry, Punjab Agricultural University, Ludhiana 141004

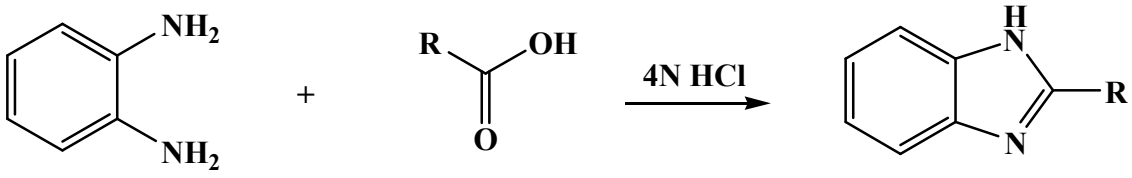
Email: geetu2487@yahoo.com

[2]Department of Plant Breeding and Genetics, Punjab Agricultural University, Ludhiana 141004

Email: sunita_sharma@pau.edu

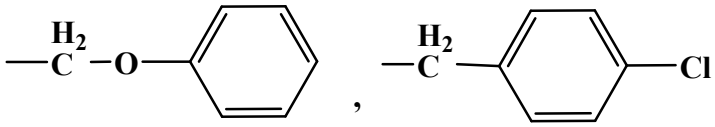
[3]Department of Chemistry, Punjab Agricultural University, Ludhiana 141004

Email: jyotgcw@gmail.com



ortho-phenylenediamine **substituted carboxylic acid** **2-substituted benzimidazole (1-5)**

R = $-CH_2CH_3$, $-CH_2CH_2CH_3$, $-CH_2CH_2CH_2CH_2CH_3$



Abstract

Condensation of orthophenylenediammine with different substitutedcarboxylic acidsafforded benzimidazoles in the presence of concentrated hydrochloric acid. Synthesized compounds were characterized by their IR, ^{1}H NMR and ^{13}C NMR spectra. Thecompounds were screened for their fungicidal activity against *Rhizoctoniasolani*and *Fusariummoniliforme* by poisoned food technique. All the benzimidazoles exhibited less activity than standard bavistin at all the tested concentrations.Some of the synthesized compounds showed promising to moderate activity.

Keywords: Benzimidazoles, orthophenylenediammine, fungitoxicity and ED_{50}.