

List of Tables

| Table No. | Title | Page No. |
|------------------|---|-----------------|
| 1.1 | Historically Significant Multicomponent Reactions | 24 |
| 2.1 | Optimization of reaction conditions | 66 |
| 2.2 | Synthesis of 3,4-dihydropyrimidin-2(1H)-thione derivatives | 68 |
| 3.1 | Optimization of the reaction condition on the synthesis of 5a | 114 |
| 3.2 | Synthesis of Pyridine fused heterocycles (5a-5o) | 117 |
| 3.3 | Reaction of acetylenedicarboxylate with cyclic 1,3-diketone, aromatic aldehydes and aniline | 119 |
| 4.1 | Some biological active derivatives of Benzimidazole | 143 |
| 4.2 | Optimization of the reaction condition | 161 |
| 4.3 | Synthesis of 2,10-dihydrobenzo[4,5- <i>d</i>]imidazo[1,2- <i>a</i>]pyrimidine-4-carboxylic acid derivatives (4a-4o) | 162 |
| 4.4 | Reaction of 2-aminobenzothiazoles with pyruvic acid and aromatic aldehydes | 163 |
| 5.1 | Optimization of the reaction condition | 197 |
| 5.2 | Synthesis of 5H-benzo[4,5- <i>d</i>]thiazolo[2,3- <i>b</i>]pyrimidine-4-carboxylic acid derivatives(4a-4o) | 201 |
| 5.3 | Reaction of 2-aminobenzothiazoles with pyruvic acid and aromatic aldehydes | 202 |