CHAPTER III
SUMMARY OF THE WORK

Starting Materials:

4-Benzencesulphonamidoacetophenone, 3-benzencesulphonamidoacetophenone, 1-(4-benzencesulphonamidophenyl)-3-aryl-prop-2-en-1-ones (1a-e) and 1-(3-benzencesulphonamidophenyl)-3-aryl-prop-2-en-1-ones (2a-e) were prepared by the procedure as described in Chapter IV of Part I of this thesis.

1-isonicotinoyl/carboxamido-3-(4-benzencesulphonamidophenyl)-5-aryl pyrazolines (3a-e/4a-e):

Pyrazolines (3a-e/4a-e) were prepared by refluxing 1-(4-benzencesulphonamidophenyl)-3-aryl-prop-2-en-1-ones (1a-e) with isonicotinic acid hydrazide/semicarbazide hydrochloride in pyridine medium for 8 hrs. Thus following pyrazolines were synthesized.

1. (3a) 1-isonicotinoyl-3-(4-benzencesulphonamidophenyl)-5-phenyl pyrazoline, m.p. 172°C.
2. (3b) 1-isonicotinoyl-3-(4-benzencesulphonamidophenyl)-5-(4-methoxy phenyl) pyrazoline, m.p. 198°C.
3. (3c) 1-isonicotinoyl-3-(4-benzencesulphonamidophenyl)-5-(4-dimethyl aminophenyl) pyrazoline, m.p. 130°C.
4. (3d) 1-isonicotinoyl-3-(4-benzencesulphonamidophenyl)-5-(4-hydroxy phenyl) pyrazoline, m.p. 120°C.
5. (3e) 1-isonicotinoyl-3-(4-benzencesulphonamidophenyl)-5-(4-hydroxy-3-methoxyphenyl) pyrazoline, m.p. 125°C.
6. (4a) 1-carboxamido-3-(4-benzenesulphonamidophenyl)-5-phenyl pyrazoline, m.p. 168°C.

7. (4b) 1-carboxamido-3-(4-benzenesulphonamidophenyl)-5-(4-methoxy phenyl) pyrazoline, m.p. 160°C.

8. (4c) 1-carboxamido-3-(4-benzenesulphonamidophenyl)-5-(4-dimethyl aminophenyl) pyrazoline, m.p. 150°C.

9. (4d) 1-carboxamido-3-(4-benzenesulphonamidophenyl)-5-(4-hydroxy phenyl) pyrazoline, m.p. 175°C.

10. (4e) 1-carboxamido-3-(4-benzenesulphonamidophenyl)-5-(4-hydroxy-3-methoxyphenyl) pyrazoline, m.p. 185°C.

1-isonicotinoyl/carboxamido-3-(3-benzenesulphonamidophenyl)-5-aryl pyrazolines (5a-e/6a-e):

Pyrazolines (5a-e/6a-e) were prepared by refluxing 1-(3-benzene sulphonamidophenyl)-3-aryl-prop-2-en-1-ones (2a-e) with isonicotinic acid hydrazide/semicarbazide hydrochloride in pyridine medium for 8 hrs. Thus following pyrazolines were synthesized.

1. (5a) 1-isonicotinoyl-3-(3-benzenesulphonamidophenyl)-5-phenyl pyrazoline, m.p. 168°C.

2. (5b) 1-isonicotinoyl-3-(3-benzenesulphonamidophenyl)-5-(4-methoxy phenyl) pyrazoline, m.p. 164°C.

3. (5c) 1-isonicotinoyl-3-(3-benzenesulphonamidophenyl)-5-(4-dimethyl aminophenyl) pyrazoline, m.p. 150°C.

4. (5d) 1-isonicotinoyl-3-(3-benzenesulphonamidophenyl)-5-(4-hydroxy phenyl) pyrazoline, m.p. 180°C.
5. (5e) 1-isonicotinoyl-3-(3-benzenesulphonamidophenyl)-5-(4-hydroxy-3-
methoxyphenyl) pyrazoline, m.p. 132°C.

6. (6a) 1-carboxamido-3-(3-benzenesulphonamidophenyl)-5-phenyl
pyrazoline, m.p. 161°C.

7. (6b) 1-carboxamido-3-(3-benzenesulphonamidophenyl)-5-(4-methoxy
phenyl) pyrazoline, m.p. 225°C.

8. (6c) 1-carboxamido-3-(3-benzenesulphonamidophenyl)-5-(4-dimethyl
aminophenyl) pyrazoline, m.p. 218°C.

9. (6d) 1-carboxamido-3-(3-benzenesulphonamidophenyl)-5-(4-hydroxy
phenyl) pyrazoline, m.p. 160°C.

10. (6e) 1-carboxamido-3-(3-benzenesulphonamidophenyl)-5-(4-hydroxy-3-
methoxyphenyl) pyrazoline, m.p. 120°C.

The structures of the synthesized compounds were confirmed on the
basis of elemental analysis, chemical properties and spectral analysis (viz. IR
and 1H NMR). The plausible mechanism for the formation of pyrazolines has
been discussed.