CHAPTER V

CONCLUSIONS

The results of this study were concluded as followed:

1. Indicative substance from *Butea superba* Roxb. was medicarpin, which was found in the tuber root of the plant and isolated with column chromatography method. Moreover it showed pharmacological activity contributing in some extent to efficacy.

2. *Butea superba* in ethanolic extract were subjected to transform to dry powder extract with various inert pharmaceutical excipients as corn starch and tapioca starch. In the formulation of 50% ethanolic *Butea superba* extract was compound with binder as Avicel® PH102 as binder. On the contrary, formulation of 95% ethanolic *Butea superba* extract was without binder. Dry granule *Butea superba* extract were examined by organoleptic properties, moisture content, flow rate, bulk density and compressibility for the selection to the tablet process.

3. The formulation of *Butea superba* extract tablets contained Ac-Di-Sol® as disintegrant, stearic acid as lubricant and Aerosil® as glidant. These excipient were compatible with dry granule *Butea superba* extract. 50% ethanolic *Butea superba* extract tablet (F5-BS-50) compounding with *Butea superba* extract, tapioca starch, corn starch, Avicel® PH102, Ac-Di-Sol®, stearic acid and Aerosil®, and 95% ethanolic *Butea superba* extract (F1-BS-95) tablet compounding with *Butea superba* extract, Tapioca starch, Ac-Di-Sol® , stearic acid and Aerosil® were selected for further study.

4. Evaluation data of selected *Butea superba* extract tablets showed that;

4.1 Their physical appearance depended on the type of raw material. 50% ethanolic *Butea superba* extract obtained brown tablets and 95% ethanolic *Butea superba* extract gave mild red-purple tablets.

4.2 The tablet formulations of F5-BS-50 and F1-BS-95 showed less of friability than the other formulations.

4.3 The hardness, weight variation and content uniformity of tablet formulations F5-BS-50 and F1-BS-95 were within the compendial specification.

4.4 The assay contents of medicarpin in tablet formulations F5-BS-50 and F1-BS-95 were within the range of 84-107% and 92-104% label amount, respective.

4.5 The tablets of 95% ethanolic *Butea superba* extract showed longer the disintegration time than those of 50% ethanolic *Butea superba* extract.

4.6 The dissolution study tested in the 20% ethanolic medium for 30 minutes showed the released of medicarpin from both tablet formulations.

5. The stability study of 50% ethanolic *Butea superba* extract tablets storage in glass desiccators under ambient temperature for 1 year and 10 months showed a slight change in properties.

6. The formulation development of *Butea superba* extract tablets with indicative isoflavonoid substance, showed that the physicochemical properties seemed to follow to the conventional tablets in pharmacopeia. Good stability seed to be obtained. Standard operation in manufacturing and quality control of *Butea superba* extract tablets could be performed.