## **List of Figures**

Figure	Title	Page
1.1	Chemical structure of carpaine.	4
2.1	Flow chart of an acid base extraction.	24
2.2	Carbon dioxide pressure-temperature phase diagram.	25
4.1	Comparison of the morphology and development somatic embryo induction in CI media with 250 mg/L carbenicillin and without 250 mg/L carbenicillin.	49
4.2	Time course of callus growth of <i>Carica papaya</i> L. var. Eksotika cultured on CI medium with 250 mg/L carbenicillin.	51
4.3	Different response of embryogenic callus from different plates towards the formation of somatic embryo.	52
4.4	Globular and wet callus double-stained red with acetocarmine.	53
4.5	Longitudinal sections of the embryogenic cells after days 14, 21, 40, and 60 days of inoculations in MS medium containing 10 mg/L 2,4-D.	55- 56
4.6	Comparison of time course of fresh weight (FW) of cell suspension grown in batches of 150 mL in Erlenmeyer flasks between LM medium with and without 250 mg/L carbenicillin.	61
4.7	Suspended cells, Developed somatic embryos, Cytoplasmic and non cytoplasmic cell and Fluorescing cells with dense cytoplasm.	63

4.8	The developmental stage of somatic embryo.	65
4.9	The formation of profuse roots and normal plantlets.	71
4.10	Pictures of carpaine isolated through conventional acid/base extraction.	75
4.11	Pictures of carpaine isolated through supercritical fluid extraction.	80
4.12	Magnetic Resonance Spectrometry of samples from acid/base extraction.	83
4.13	Magnetic Resonance Spectrometry of samples from supercritical fluid extraction.	87
4.14	GC-MS of samples from acid/base extraction.	90
4.15	GC-MS of samples from supercritical fluid extraction.	100