

LIST OF TABLES	PAGES
Table 2.1. Sampling sites and number of actinomycetes isolates from Gujarat region	40
Table 2.2: The Physico-chemical characterization of Rhizospheric soil	46
Table 2.3: Cultural and morphological characteristics of some of the promising isolates	48
Table 2.4. Colony characteristics of actinomycete isolates on different ISP Medium	49
Table 2.5. PGP potential of Actinomycetes isolates	53
Table 3.1: Molecular ion (m/z) and fragment ion peaks	67
Table 3.2: ¹ H NMR Total Proton	73
Table 4.1: Media used for selection of Basal medium	81
Table 4.2: CCD experimental trials	82
Table 4.3: CCD experimental trials in terms of volume	83
Table 4.4: Central Composite Design matrix used in RSM studies along with the experimental response in terms of antifungal activity	90
Table 4.5: Experimental validation of the combined effect of variables under unoptimized and optimized levels on the antifungal activity of <i>Streptomyces</i> sp. S-9	94
Table 6.1: Primer Sequence	138
Table 6.2: General genome features of <i>Streptomyces</i> sp. S-9	140
Table 6.3: Antibiotic Resistance Gene Prediction Analysis in S-9	145
Table 6.4: Biosynthetic gene cluster for secondary metabolites	146
Table 6.5: Quantification of isolated RNA samples on NanoDrop and Agilent Tape Station	147
Table 6.6: RIN value of RNA	148
Table 6.7: cDNA value for qRT-PCR	148
Table 6.8: Ct value of qRT-PCR	149
Table 6.9 :Result of differential expression analysis	153