

## LIST OF TABLES

Table 2-1: List of Instruments Used .....	52
Table 2-2: Locality of Taxa Under Study .....	53
Table 2-3: Extraction Buffer (100 ml) .....	61
Table 2-4: Stock Solutions for PAGE.....	62
Table 2-5: Stock Solutions Required for Preparing Gels .....	63
Table 2-6 : Details of Sample Collection from Different Locations .....	83
Table 2-7: Oligonucleotide 10 Mer Primers Used In RAPD .....	84
Table 2-8: Stock Solutions For Genomic DNA Extraction .....	85
Table 2-9: Stock Solutions for Agarose Gel Electrophoresis .....	88
Table 3-1: Estimation of Carbohydrates .....	97
Table 3-2: Estimation of Photosynthetic Pigments .....	98
Table 3-3: Rf Value of Photosynthetic Pigments.....	99
Table 3-4: Assay of Amylase Enzyme Activity.....	100
Table 3-5: Estimation of Proteins .....	100
Table 3-6: Estimation of Total Free Amino Acids.....	101
Table 3-7: Analytical Results for Amino Acids.....	103
Table 3-8: HPLC Analysis of Amino Acids .....	104
Table 3-9: ANOVA of Carbohydrate Content of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	105
Table 3-10: ANOVA of Protein Content of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	105

Table 3-11: ANOVA of Free Amino Acid Content of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	105
Table 3-12: ANOVA of Amylase Enzyme Activity of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	105
Table 3-13: ANOVA of Total Chlorophyll of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	105
Table 3-14: ANOVA of Chlorophyll <i>a</i> Content of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	106
Table 3-15: ANOVA of Chlorophyll <i>b</i> Content of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	106
Table 3-16: ANOVA of Carotenoids Content of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	106
Table 3-17: ANOVA of Chlorophyll <i>a/b</i> Ratio of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	106
Table 3-18: Qualitative Morphology .....	108
Table 3-19: Quantitative Morphology of <i>Phytolacca octandra</i> L. ....	109
Table 3-20: Quantitative Morphology of <i>Petiveria alliacea</i> L. ....	109
Table 3-21: Quantitative Morphology of <i>Rivina humilis</i> L. ....	110
Table 3-22: Microscopic Features of the Sample Leaves.....	111
Table 3-23: Microscopic Features of Plant Powder .....	112
Table 3-24: Organoleptic Evaluation of Plant Powder.....	112
Table 3-25: Qualitative Analysis of Phytoconstituents .....	113
Table 3-26: Fluorescence Analysis of <i>Phytolacca octandra</i> L.....	114
Table 3-27: Fluorescence Analysis of <i>Petiveria alliacea</i> L.....	115
Table 3-28: Fluorescence Analysis of <i>Rivina humilis</i> L.....	115
Table 3-29: Estimation of Total Phenolic Compounds .....	116
Table 3-30: Estimation of Alkaloid .....	117
Table 3-31: Estimation of Flavonoid.....	117

Table 3-32: Estimation of Resin.....	117
Table 3-33: Estimation of Tannin.....	117
Table 3-34: Estimation of Saponin.....	118
Table 3-35: ANOVA of Stomatal Indices of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	118
Table 3-36: ANOVA of Palisade Ratio of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	119
Table 3-37: ANOVA of Vein – Islet Number of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	119
Table 3-38: ANOVA of Veinlet Termination Number of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	119
Table 3-39: ANOVA of Size of Starch Grains of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	119
Table 3-40: ANOVA of Size of Calcium Oxalate Crystals of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L.....	119
Table 3-41: ANOVA of Size of Fibres of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	120
Table 3-42: ANOVA of Size of Tracheids of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	120
Table 3-43: ANOVA of Size of Vessels of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	120
Table 3-44: ANOVA of Size of Trichomes of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	120
Table 3-45: ANOVA of Total Phenolic Compounds of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	120
Table 3-46: ANOVA of Percentage of Alkaloid of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	121
Table 3-47: ANOVA of Percentage of Flavonoid of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	121
Table 3-48: ANOVA of Percentage of Resin of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	121

Table 3-49: ANOVA of Percentage of Tannin of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	121
Table 3-50: ANOVA of Percentage of Saponin of <i>Phytolacca octandra</i> L., <i>Petiveria alliacea</i> L. and <i>Rivina humilis</i> L. ....	121
Table 3-51: Antimicrobial Screening of <i>Phytolacca octandra</i> L. ....	123
Table 3-52: Antimicrobial Screening of <i>Petiveria alliacea</i> L. ....	124
Table 3-53: Antimicrobial Screening of <i>Rivina humilis</i> L. ....	125
Table 3-54: Phenotypic Variations Among Accessions of <i>Phytolacca octandra</i> L. ....	126
Table 3-55: Phenotypic Variations Among Accessions of <i>Petiveria alliacea</i> L. ....	127
Table 3-56: Phenotypic Variations Among Accessions of <i>Rivina humilis</i> L. ....	128
Table 3-57: ANOVA of Length of Leaf Blade of Accessions of <i>Phytolacca octandra</i> L. ....	129
Table 3-58: ANOVA of Width of Leaf Blade of Accessions of <i>Phytolacca octandra</i> L. ....	129
Table 3-59: ANOVA of Length of Leaf from Tip to Widest Width of Accessions of <i>Phytolacca octandra</i> L. ....	129
Table 3-60: ANOVA of Petiole Length Leaf Blade of Accessions of <i>Phytolacca octandra</i> L. ....	129
Table 3-61: ANOVA of Length of Leaf Blade of Accessions of <i>Petiveria alliacea</i> L. ....	129
Table 3-62: ANOVA of Width of Leaf Blade of Accessions of <i>Petiveria alliacea</i> L. ....	130
Table 3-63: ANOVA of Length of Leaf from Tip to Widest Width of Accessions of <i>Petiveria alliacea</i> L. ....	130
Table 3-64: ANOVA of Petiole Length of Accessions of <i>Petiveria alliacea</i> L. ....	130
Table 3-65: ANOVA of Length of Leaf Blade of Accessions of <i>Rivina humilis</i> L. ....	130

Table 3-66: ANOVA of Width of Leaf Blade of Accessions of <i>Rivina humilis</i> L.....	130
Table 3-67: ANOVA of Length of Leaf from Tip to Widest Width of Accessions of <i>Rivina humilis</i> L. ....	131
Table 3-68: ANOVA of Petiole Length of Accessions of <i>Rivina humilis</i> L.....	131
Table 3-69: ANOVA of Inflorescence Length of Accessions of <i>Phytolacca octandra</i> L.....	131
Table 3-70: ANOVA of Number of Flowers per Inflorescence of Accessions of <i>Phytolacca octandra</i> L. ....	131
Table 3-71: ANOVA of Pedicel Length of Accessions of <i>Phytolacca octandra</i> L. ....	131
Table 3-72: ANOVA of Inflorescence Length of Accessions of <i>Petiveria alliacea</i> L. ....	132
Table 3-73: ANOVA of Number of Flowers Per Inflorescence of Accessions of <i>Petiveria alliacea</i> L.....	132
Table 3-74: ANOVA of Pedicel Length of Accessions of <i>Petiveria alliacea</i> L.....	132
Table 3-75: ANOVA of Inflorescence Length of Accessions of <i>Rivina humilis</i> L.....	132
Table 3-76: ANOVA of Number of Flowers Per Inflorescence of Accessions of <i>Rivina humilis</i> L. ....	132
Table 3-77: ANOVA of Pedicel Length of Accessions of <i>Rivina humilis</i> L.....	133
Table 3-78: ANOVA of Tepal Length of Accessions of <i>Phytolacca octandra</i> L. ....	133
Table 3-79: ANOVA of Tepal Width of Accessions of <i>Phytolacca octandra</i> L. ....	133
Table 3-80: ANOVA of Filament Length of Accessions of <i>Phytolacca octandra</i> L.....	133
Table 3-81: ANOVA of Tepal Length of Accessions of <i>Petiveria alliacea</i> L.....	133

Table 3-82: ANOVA of Tepal Width of Accessions of <i>Petiveria alliacea</i> L.....	133
Table 3-83 : ANOVA of Filament Length of Accessions of <i>Petiveria alliacea</i> L.....	134
Table 3-84: ANOVA of Tepal Length of Accessions of <i>Rivina humilis</i> L.....	134
Table 3-85: ANOVA of Tepal Width of Accessions of <i>Rivina humilis</i> L. ....	134
Table 3-86: ANOVA of Filament Length of Accessions of <i>Rivina humilis</i> L.....	134
Table 3-87: ANOVA of Number of Fruits per Inflorescence of Accessions of <i>Phytolacca octandra</i> L. ....	134
Table 3-88: ANOVA of Number of Seeds per Fruit of Accessions of <i>Phytolacca octandra</i> L.....	135
Table 3-89: ANOVA of Number of Fruits per Inflorescence of Accessions of <i>Petiveria alliacea</i> L.....	135
Table 3-90: ANOVA of Number of Seeds Per Fruit of Accessions of <i>Petiveria alliacea</i> L. ....	135
Table 3-91: ANOVA of Number of Fruits Per Inflorescence of Accessions of <i>Rivina humilis</i> L. ....	135
Table 3-92: ANOVA of Number of Seeds Per Fruit of Accessions of <i>Rivina humilis</i> L.....	135
Table 3-93: Correlation Coefficients of Phenotypic Characters of <i>Phytolacca octandra</i> L. Accessions .....	136
Table 3-94: Correlation Coefficients of Phenotypic Characters of <i>Petiveria alliacea</i> L. Accessions .....	137
Table 3-95: Correlation Coefficients of Phenotypic Characters of <i>Rivina humilis</i> L. Accessions .....	138
Table 3-96: List of Primers Used for RAPD Analysis .....	140
Table 3-97: Similarity Matrix of Genetic Relationship* Among the 9 Samples Under Study.....	141