

List of Plates

| S. No. | Particulars | Page No. |
|------------|--|----------|
| Plate 3.1. | Plant based treatment system designed in NET House of Department | 21 |
| Plate3.2. | Map showing seven residential sites of Lucknow city as drinking water sampling sites. | 22 |
| Plate3.3. | Map showing river Gomti at Lucknow and location of different sampling sites (I to VI) | 22 |
| Plate6.1. | Scanning electron microscopic (SEM) studies of <i>Pistia stratiotes</i> and <i>Hydrilla verticellata</i> parts before and after metals treatment | 96 |
| Plate 6.2 | FTIR spectra of <i>Pistia Stratiotes</i> Root (Control) | 99 |
| Plate 6.3 | FTIR spectra of <i>Pistia Stratiotes</i> Root (Metals Treated) | 99 |
| Plate 6.4 | FTIR spectra of <i>Pistia Stratiotes</i> Leaves (Control) | 100 |
| Plate 6.5 | FTIR spectra of <i>Pistia Stratiotes</i> Leaves (Metals Treated) | 100 |
| Plate 6.6 | FTIR spectra of <i>Hydrilla verticellata</i> Root (Control) | 101 |
| Plate 6.7 | FTIR spectra of <i>Hydrilla verticellata</i> Root (Metals Treated) | 101 |
| Plate 6.8 | FTIR spectra of <i>Hydrilla verticellata</i> Leaves (Control) | 102 |
| Plate 6.9 | FTIR spectra of <i>Hydrilla verticellata</i> Leaves (Metals Treated) | 102 |
| Plate 7.1. | Experiment conducted in the net house of DES, to evaluate the efficiency of selected plants for removal of nitrate, nitrite, ammonium and phosphate. | 111 |