LIST OF TABLES

Table 1.1.	Characteristic biochemical reactions for *Salmonella*	27
Table 1.2.	Diagnostic features of *Salmonella* species and subspecies	27
Table 1.3.	Designations of the O groups for serotyping of *Salmonella* (Kauffmann White scheme of classification)	31
Table 1.4.	Antigenic formulae for medically important *Salmonella* serovars from developing countries	32
Table 1.5.	Taxonomy of Bacteriophages	63
Table 1.6.	Biological and Physiochemical properties of Bacteriophages	65
Table 2.1.	Zone size interpretation chart for Kirby-Bauer disc diffusion technique	89
Table 2.2.	Overall prevalence of TC and TTC bacteria in water supply systems of Nepal	94
Table 2.3.	Mean Density of TC and TTC bacteria in water samples from three cities	94
Table 2.4.	Antibiotic susceptibility pattern of *E. coli* isolates from urban water supply systems of Nepal	101
Table 2.5.	Percentage prevalence of antibiotic resistant *E. coli*	103
Table 3.1.	Biochemical tests used for presumptive identification of *Salmonella*	121
Table 3.2.	Percentage prevalence of *Salmonella* in water supply systems of three cities in Nepal	130
Table 3.3.	*Salmonella* isolates and their characteristics	131
Table 3.4.	Prevalence of antibiotic resistant *Salmonella* serovars in urban water supply systems of Nepal	133
Table 3.5.	Quinolone MIC values for nalidixic acid resistant *Salmonella* isolates	134
Table 4.1.	Properties of isolated *Salmonella* bacteriophages	153
Table 4.2.	Host specificity of *Salmonella* bacteriophages	153

Table 4.3. Effect of *Salmonella* bacteriophage (Nephage 1) on population of *Salmonella enterica* serovar Typhimurium B8 in wastewater microcosm 154

Table 4.4. Effect of *Salmonella* bacteriophage (Nephage 2) on population of *Salmonella enterica* serovar Typhimurium B8 in wastewater microcosm 154

Table 5.1. Characterization of Bioactive *Bacillus* spp. from soils in Nepal 183

Table 5.2. Antimicrobial spectrum of bioactive *Bacillus* isolates by agar disc diffusion method 184

Table 5.3. Antimicrobial spectrum of culture supernatant of bioactive *Bacillus* 185

Table 5.4. Time course of antmicrobial activity of Culture Supernatant of *Bacillus subtilis* KBB 194

Table 5.5. Effect of temperature on inhibition of *Salmonella enterica* serovar Typhi W7 by CS of *Bacillus subtilis* KBB 194

Table 5.6. Effect of pH on inhibition of *Salmonella enterica* serovar Typhi W7 by CS of *Bacillus subtilis* KBB 195

Table 5.7. Effect of enzymes on bioactivity of CS of *Bacillus subtilis* KBB against S. Typhi W7 195

Table 5.8. Effect of solvents on bioactivity of CS of *Bacillus subtilis* KBB 196

Table 5.9. Antimicrobial spectrum of partially purified compound from *Bacillus subtilis* KBB 199

Table 5.10. Physico-chemical properties of the antimicrobial compound from *Bacillus subtilis* KBB 201