

Table S2. List of primers used for PCR amplification

Genes	Primer	Sequence (5'-3')	Amplicon size (bp)	References
<i>bla</i> _{TEM}	Forward	AGAGTATGAGTATTCAACATT	837	(1)
	Reverse	ATCTCAGCGATCTGTCTAT		
<i>bla</i> _{SHV}	Forward	GGGTTATTCTTATTTGTCGCT	929	(1)
	Reverse	TAGCGTTGCCAGTGCTCG		
<i>bla</i> _{CTX-M}	Forward	TTTGCGATGTGCAGTACCAGTAA	544	(2)
	Reverse	CGATATCGTTGGTGGTGCCATA		

References

1. **Lee SH, Kim JY, Lee SK, Jin W, Kang SG, Lee KJ.** 2000. Discriminatory detection of extended-spectrum beta-lactamases by restriction fragment length dimorphism-polymerase chain reaction. *Letters in applied microbiology* **31**:307-312.
2. **Edelstein M, Pimkin M, Palagin I, Edelstein I, Stratchounski L.** 2003. Prevalence and molecular epidemiology of CTX-M extended-spectrum beta-lactamase-producing *Escherichia coli* and *Klebsiella pneumoniae* in Russian hospitals. *Antimicrobial agents and chemotherapy* **47**:3724-3732.

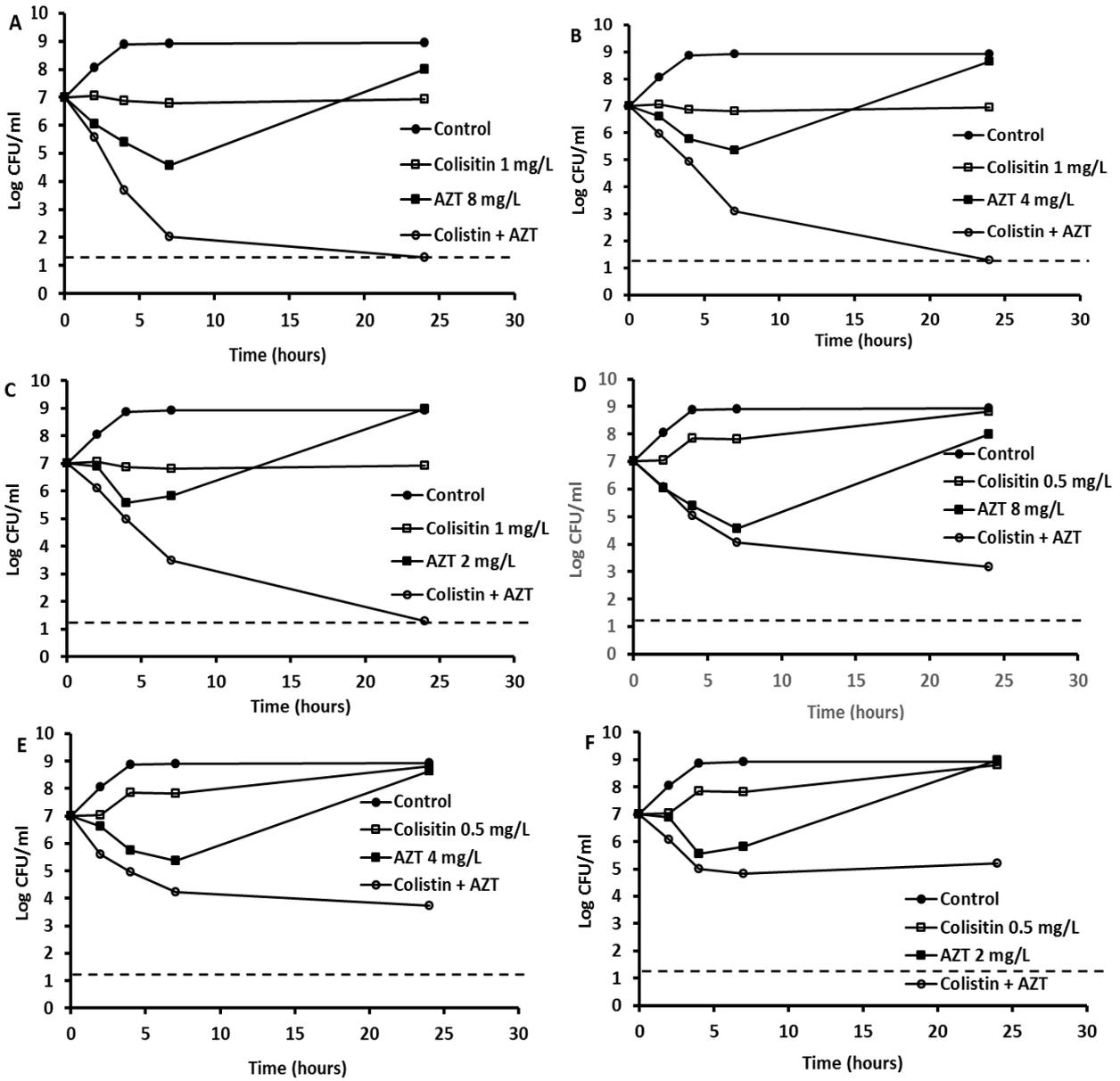


Fig S1. Time Kill analysis showing the effects of AZT in combination with colistin against NDM-1 *E. cloacae* BAA2468. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 1 mg/L + AZT 8 mg/L (A), colistin 1 mg/L + AZT 4 mg/L (B), colistin 1 mg/L + AZT 2 mg/L (C), colistin 0.5 mg/L + AZT 8 mg/L (D), colistin 0.5 mg/L + AZT 4 mg/L (E) and colistin 0.5 mg/L + AZT 2 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

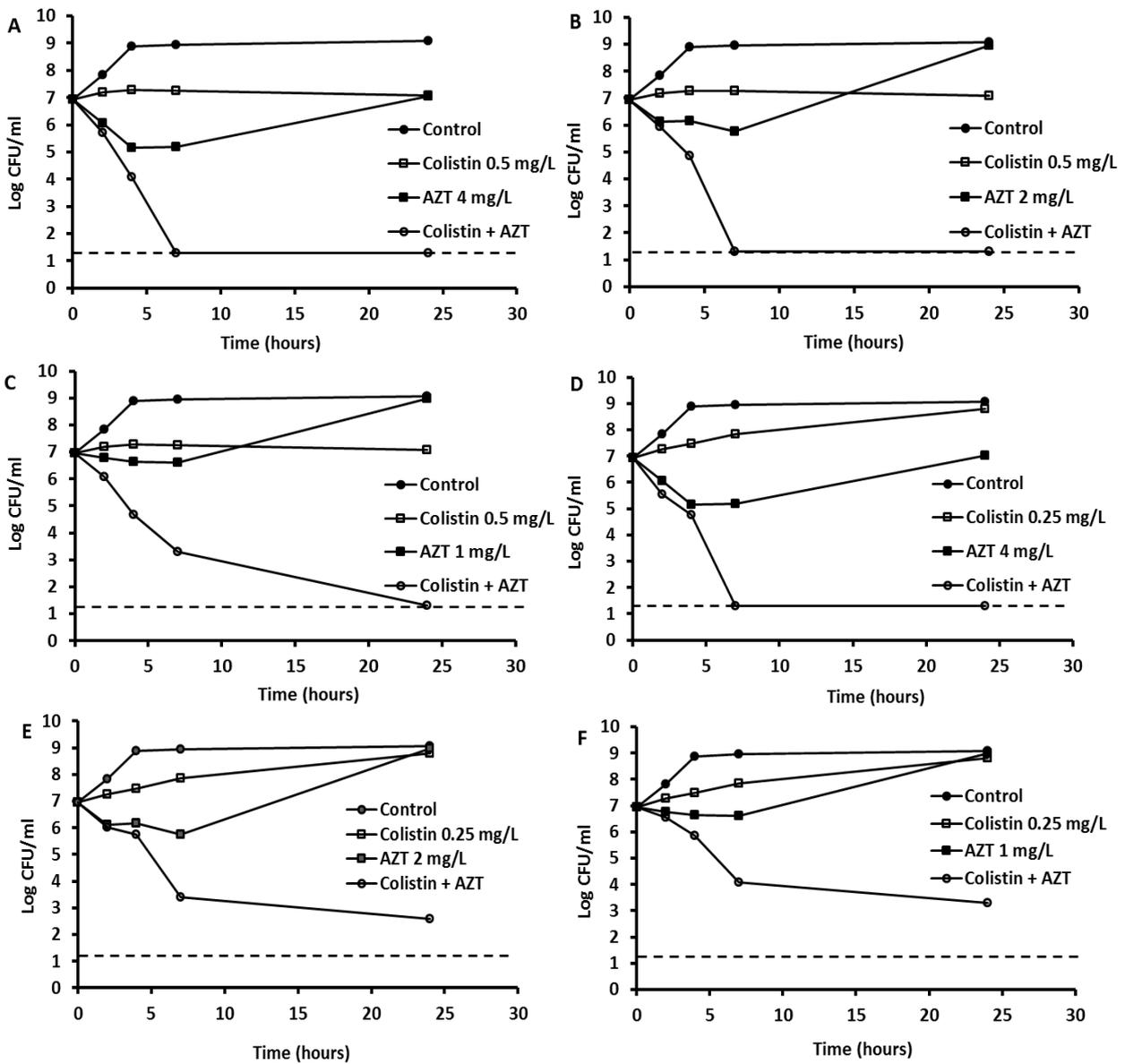


Fig S2. Time Kill analysis showing the effects of AZT in combination with colistin against NDM-1 *E. coli* BAA2469. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 0.5 mg/L + AZT 4 mg/L (A), colistin 0.5 mg/L + AZT 2 mg/L (B), colistin 0.5 mg/L + AZT 1 mg/L (C), colistin 0.25 mg/L + AZT 4 mg/L (D), colistin 0.25 mg/L + AZT 2 mg/L (E) and colistin 0.25 mg/L + AZT 1 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

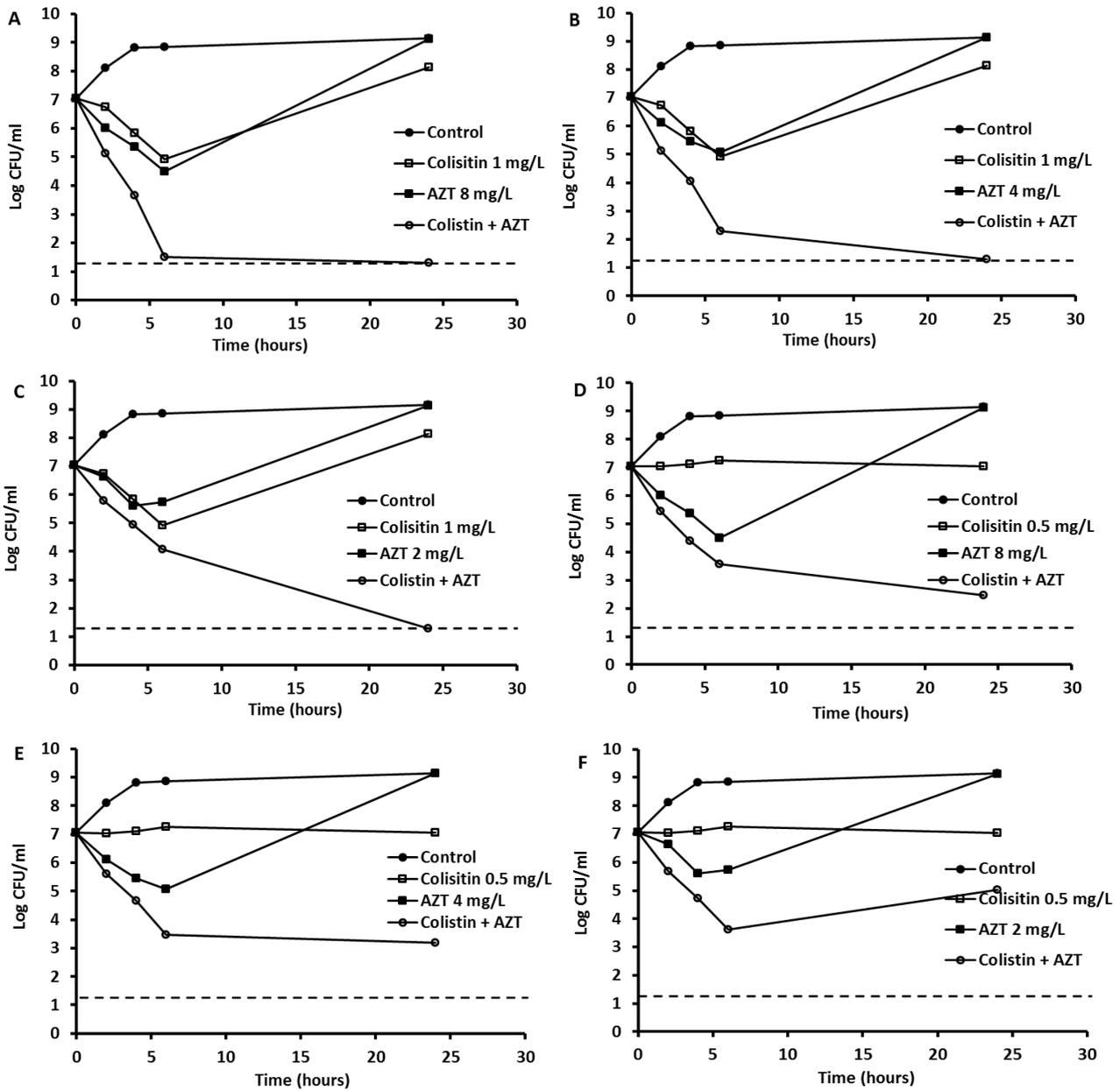


Fig S3. Time Kill analysis showing the effects of AZT in combination with colistin against NDM-1 *K. pneumoniae* BAA2470. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 1 mg/L + AZT 8 mg/L (A), colistin 1 mg/L + AZT 4 mg/L (B), colistin 1 mg/L + AZT 2 mg/L (C), colistin 0.5 mg/L + AZT 8 mg/L (D), colistin 0.5 mg/L + AZT 4 mg/L (E) and colistin 0.5 mg/L + AZT 2 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

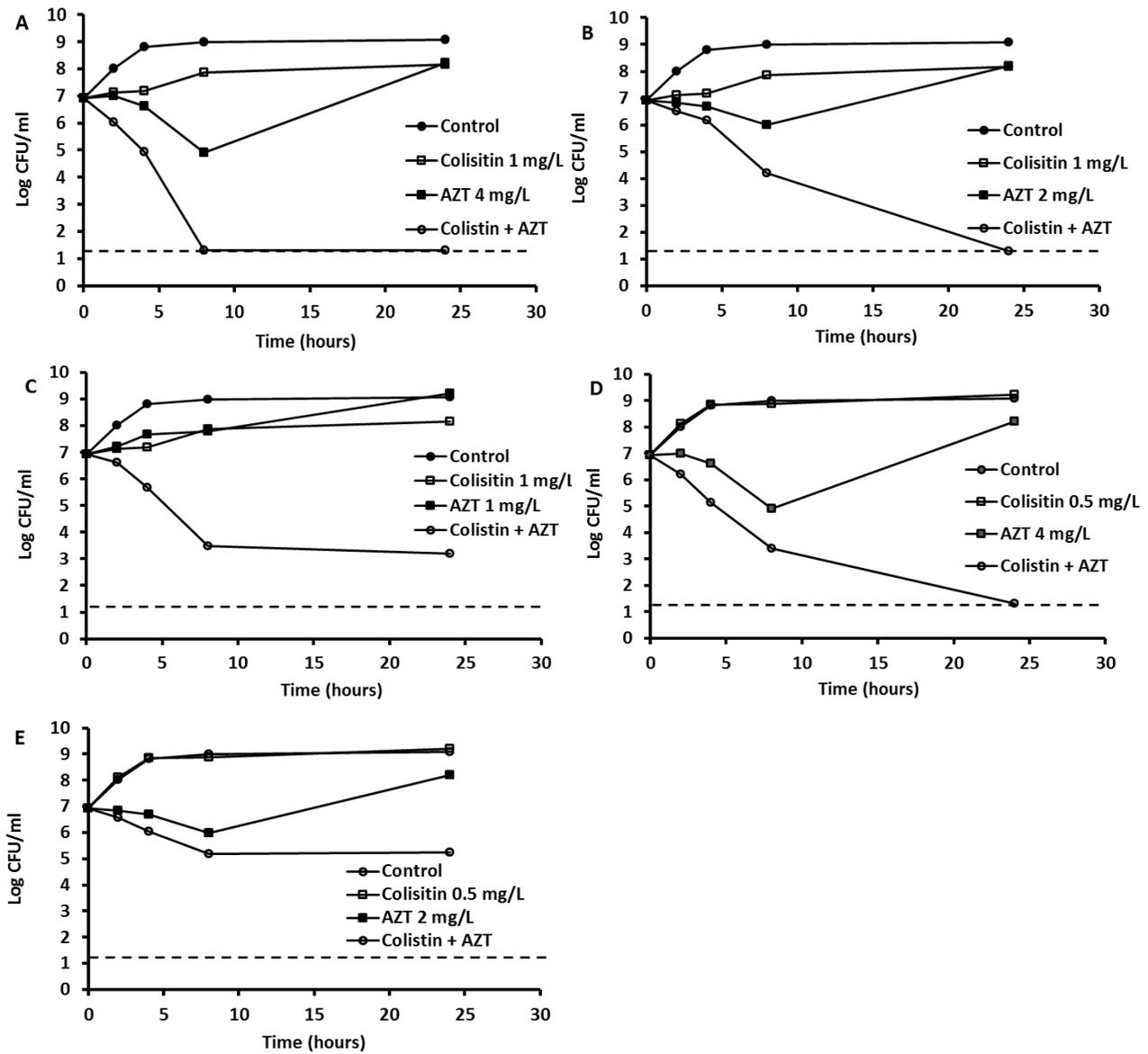


Fig S4. Time Kill analysis showing the effects of AZT in combination with colistin against NDM-1 *E. coli* BAA2471. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 1 mg/L + AZT 4 mg/L (A), colistin 1 mg/L + AZT 2 mg/L (B), colistin 1 mg/L + AZT 1 mg/L (C), colistin 0.5 mg/L + AZT 4 mg/L (D) and colistin 0.5 mg/L + AZT 2 mg/L (E). The dash line is the limit of detection in the assay (20 CFU/ml).

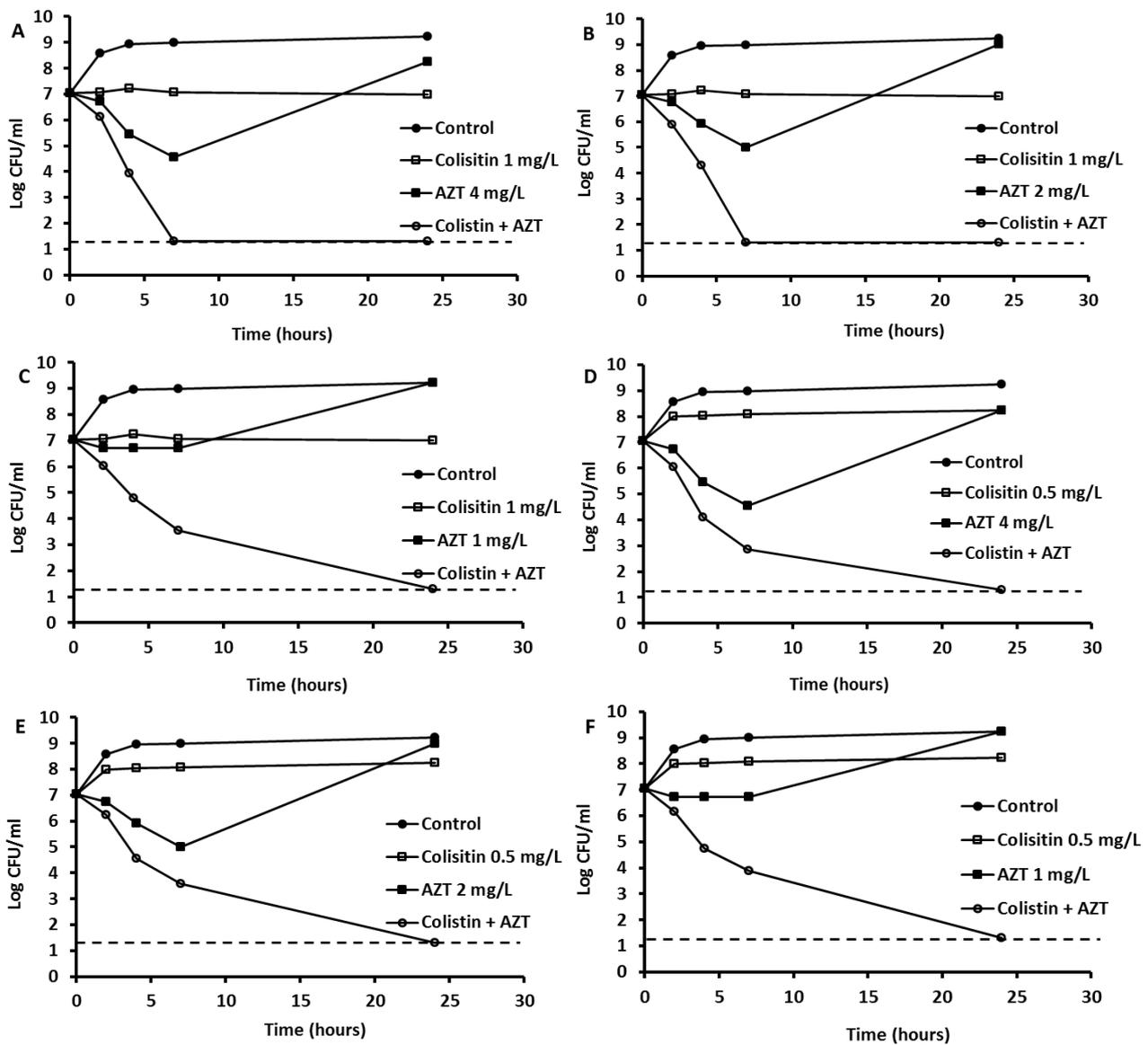


Fig S5. Time Kill analysis showing the effects of AZT in combination with colistin against NDM-1 *K. pneumoniae* BAA2473. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 1 mg/L + AZT 4 mg/L (A), colistin 1 mg/L + AZT 2 mg/L (B), colistin 1 mg/L + AZT 1 mg/L (C), colistin 0.5 mg/L + AZT 4 mg/L (D), colistin 0.5 mg/L + AZT 2 mg/L (E) and colistin 0.5 mg/L + AZT 1 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

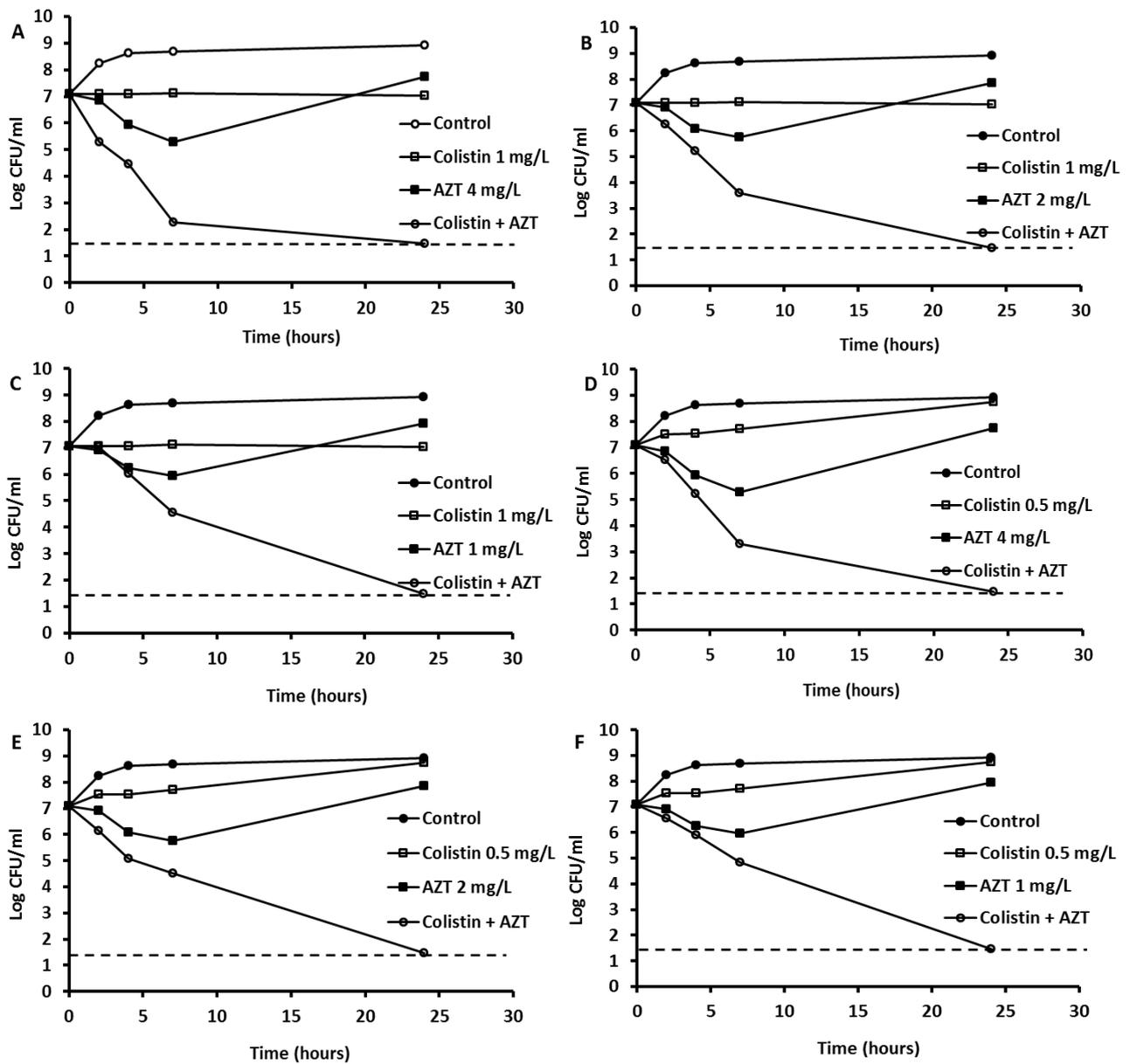


Fig S6. Time Kill analysis showing the effects of AZT in combination with colistin against NDM-1 *K. pneumoniae* NCTC13443. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 1 mg/L + AZT 4 mg/L (A), colistin 1 mg/L + AZT 2 mg/L (B), colistin 1 mg/L + AZT 1 mg/L (C), colistin 0.5 mg/L + AZT 4 mg/L (D), colistin 0.5 mg/L + AZT 2 mg/L (E) and colistin 0.5 mg/L + AZT 1 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

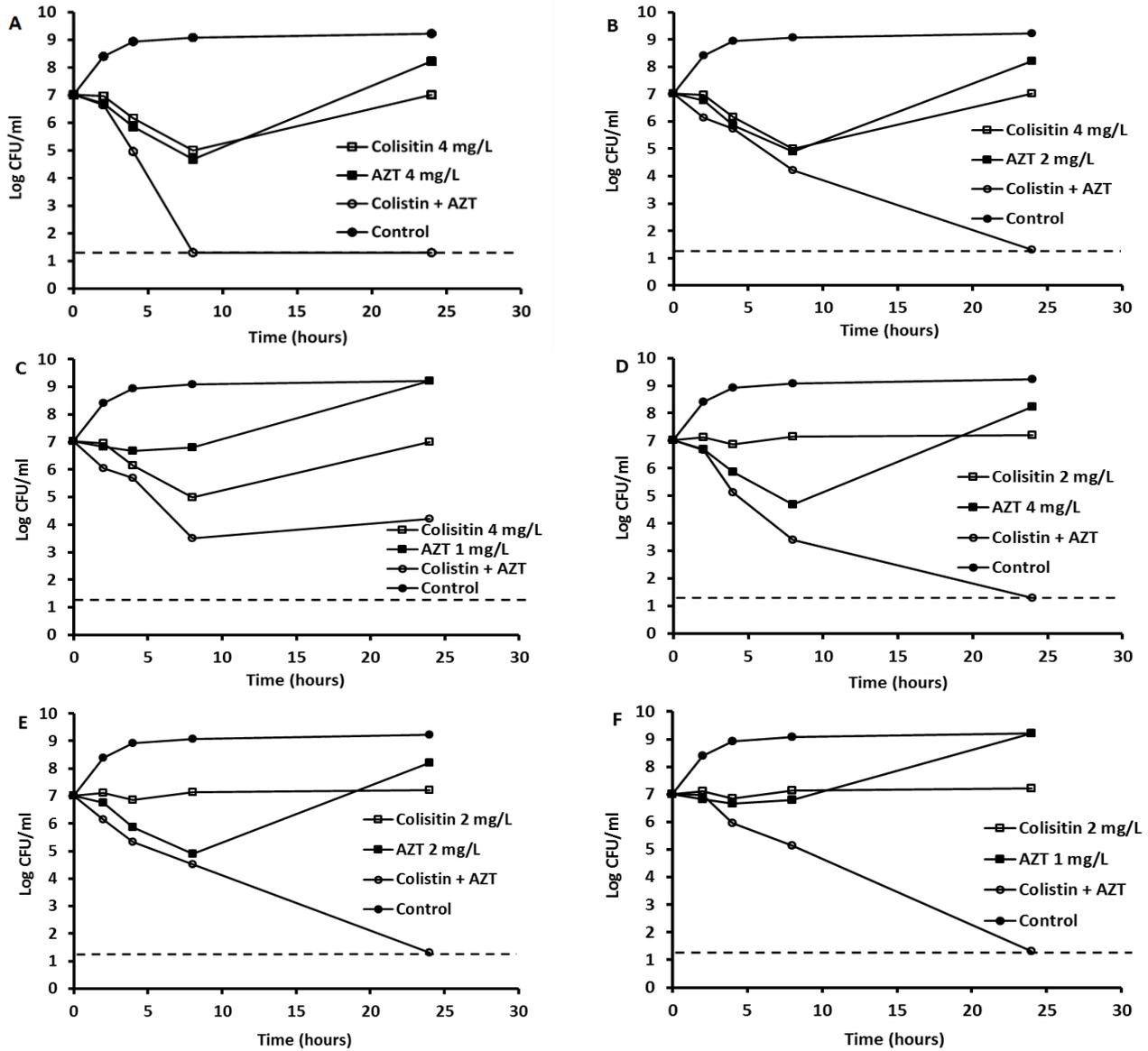


Fig S7. Time Kill analysis showing the effects of AZT in combination with colistin against ESBL *E. coli* 62. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 4 mg/L + AZT 4 mg/L (A), colistin 4 mg/L + AZT 2 mg/L (B), colistin 4 mg/L + AZT 1 mg/L (C), colistin 2 mg/L + AZT 4 mg/L (D), colistin 2 mg/L + AZT 2 mg/L (E) and colistin 2 mg/L + AZT 1 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

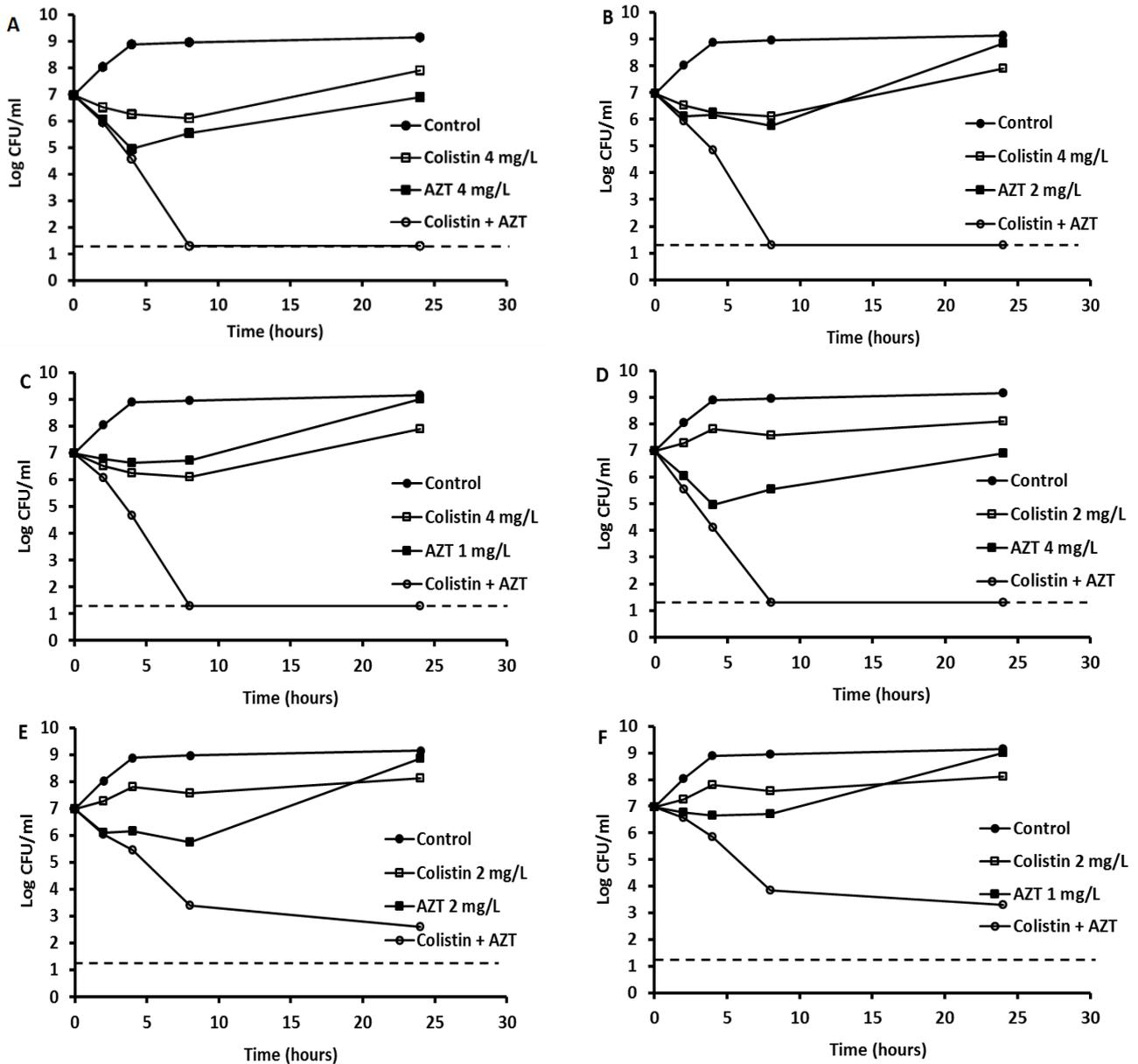


Fig S8. Time Kill analysis showing the effects of AZT in combination with colistin against ESBL *E. coli* 54. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 4 mg/L + AZT 4 mg/L (A), colistin 4 mg/L + AZT 2 mg/L (B), colistin 4 mg/L + AZT 1 mg/L (C), colistin 2 mg/L + AZT 4 mg/L (D), colistin 2 mg/L + AZT 2 mg/L (E) and colistin 2 mg/L + AZT 1 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

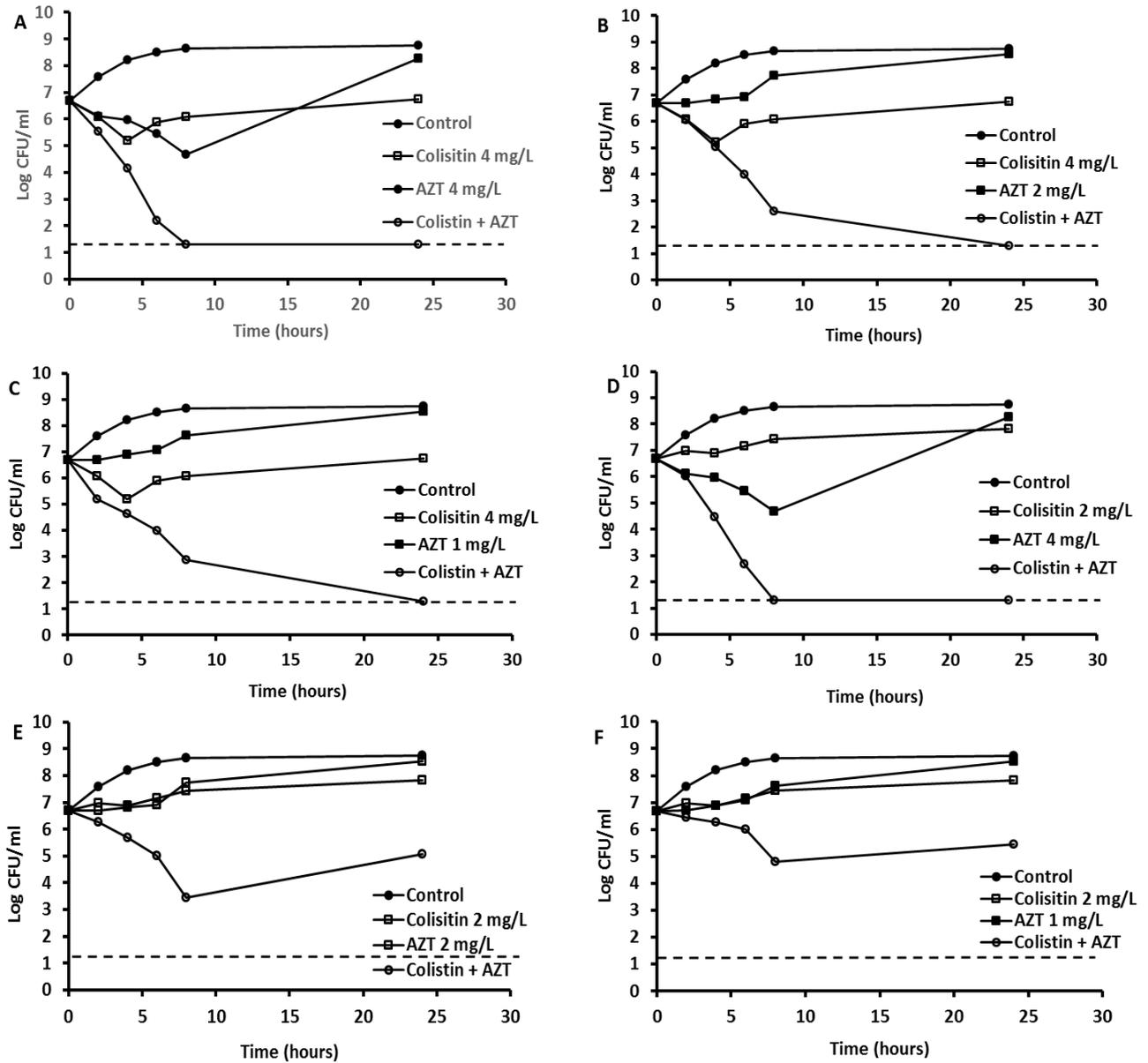


Fig S9. Time Kill analysis showing the effects of AZT in combination with colistin against ESBL *E. coli* E38. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 4 mg/L + AZT 4 mg/L (A), colistin 4 mg/L + AZT 2 mg/L (B), colistin 4 mg/L + AZT 1 mg/L (C), colistin 2 mg/L + AZT 4 mg/L (D), colistin 2 mg/L + AZT 2 mg/L (E) and colistin 2 mg/L + AZT 1 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

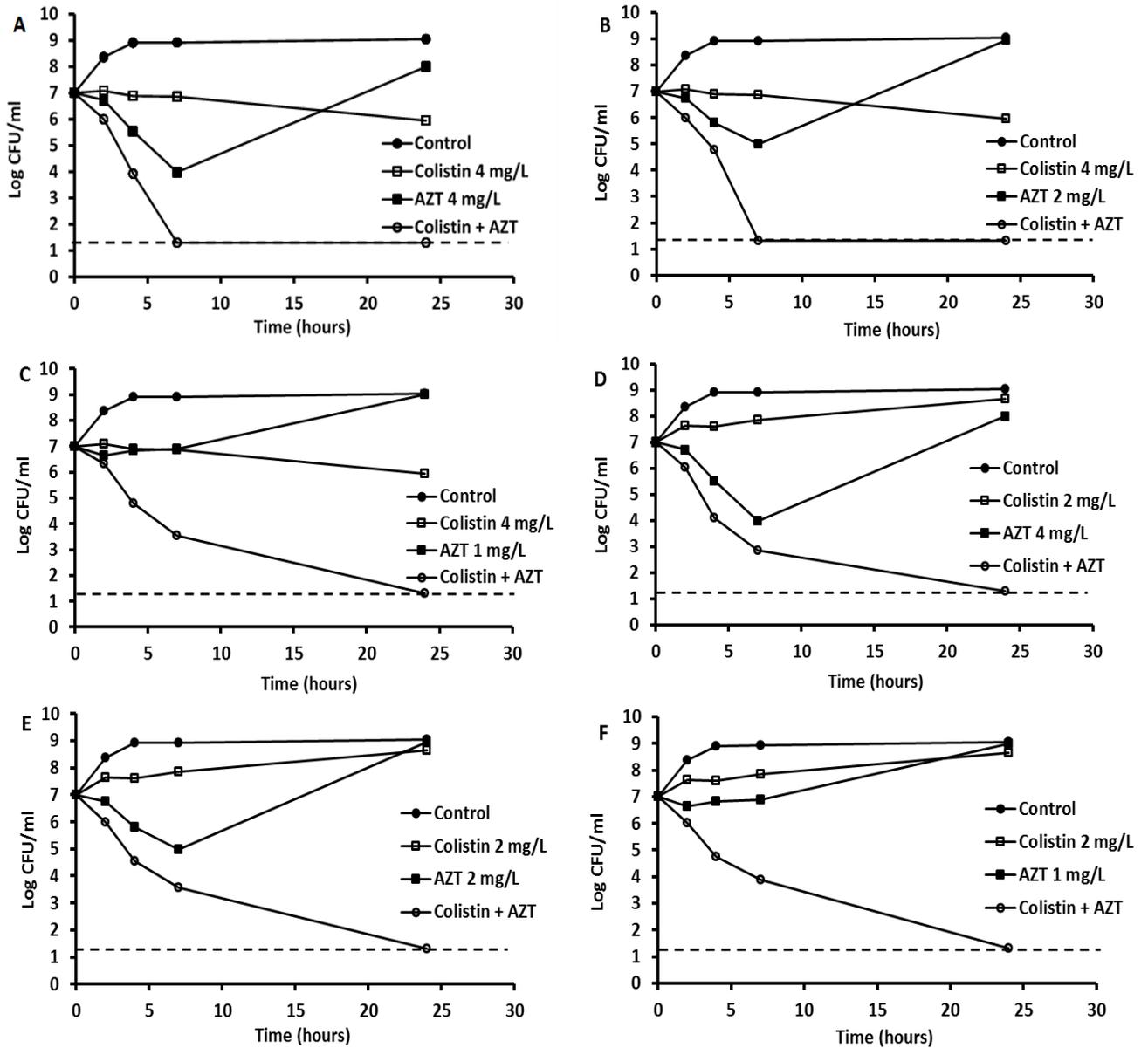


Fig S10. Time Kill analysis showing the effects of AZT in combination with colistin against ESBL *K. pneumoniae* 86. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 4 mg/L + AZT 4 mg/L (A), colistin 4 mg/L + AZT 2 mg/L (B), colistin 4 mg/L + AZT 1 mg/L (C), colistin 2 mg/L + AZT 4 mg/L (D), colistin 2 mg/L + AZT 2 mg/L (E) and colistin 2 mg/L + AZT 1 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

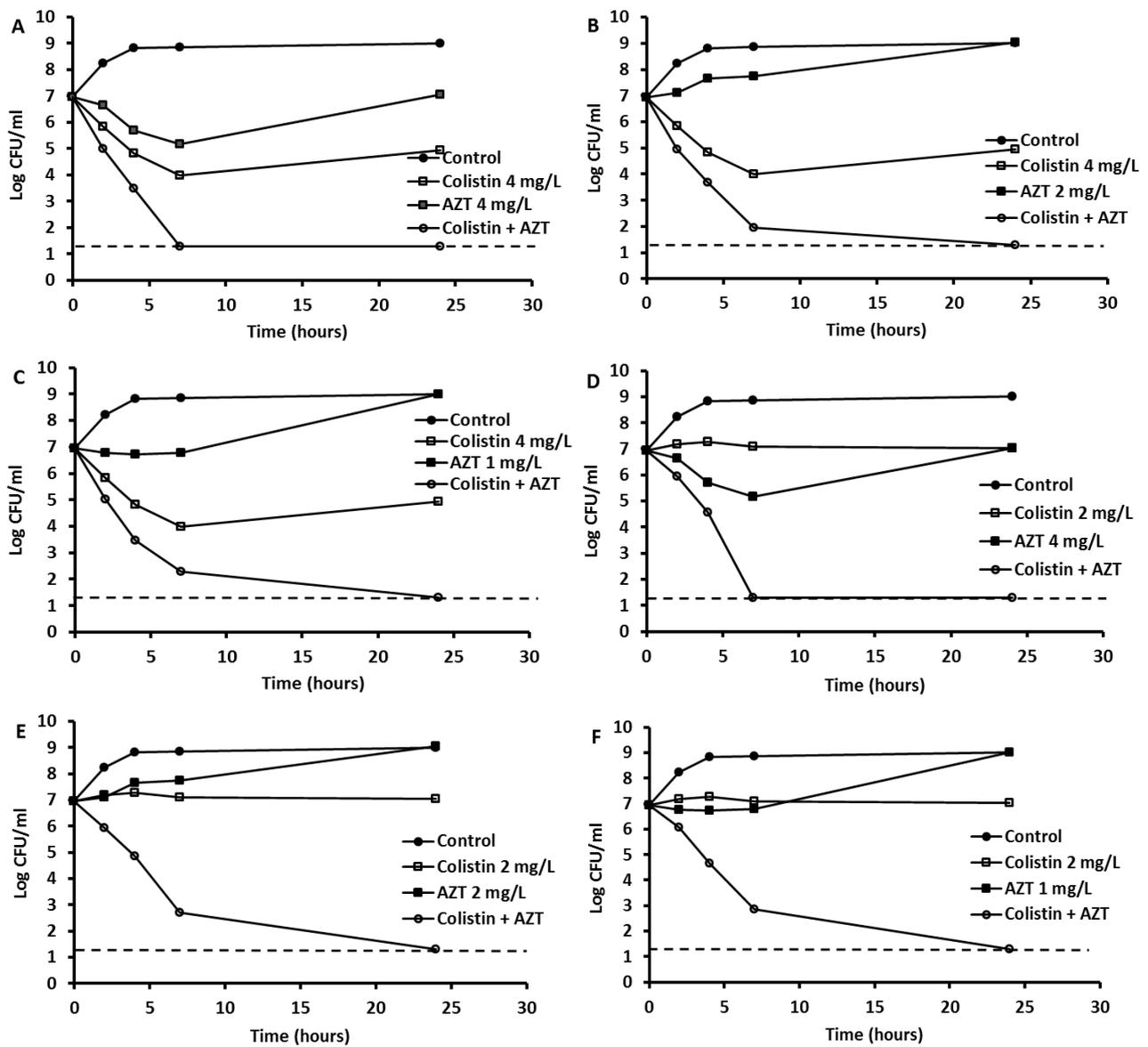


Fig S11. Time Kill analysis showing the effects of AZT in combination with colistin against ESBL *K. pneumoniae* 80. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 4 mg/L + AZT 4 mg/L (A), colistin 4 mg/L + AZT 2 mg/L (B), colistin 4 mg/L + AZT 1 mg/L (C), colistin 2 mg/L + AZT 4 mg/L (D), colistin 2 mg/L + AZT 2 mg/L (E) and colistin 2 mg/L + AZT 1 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

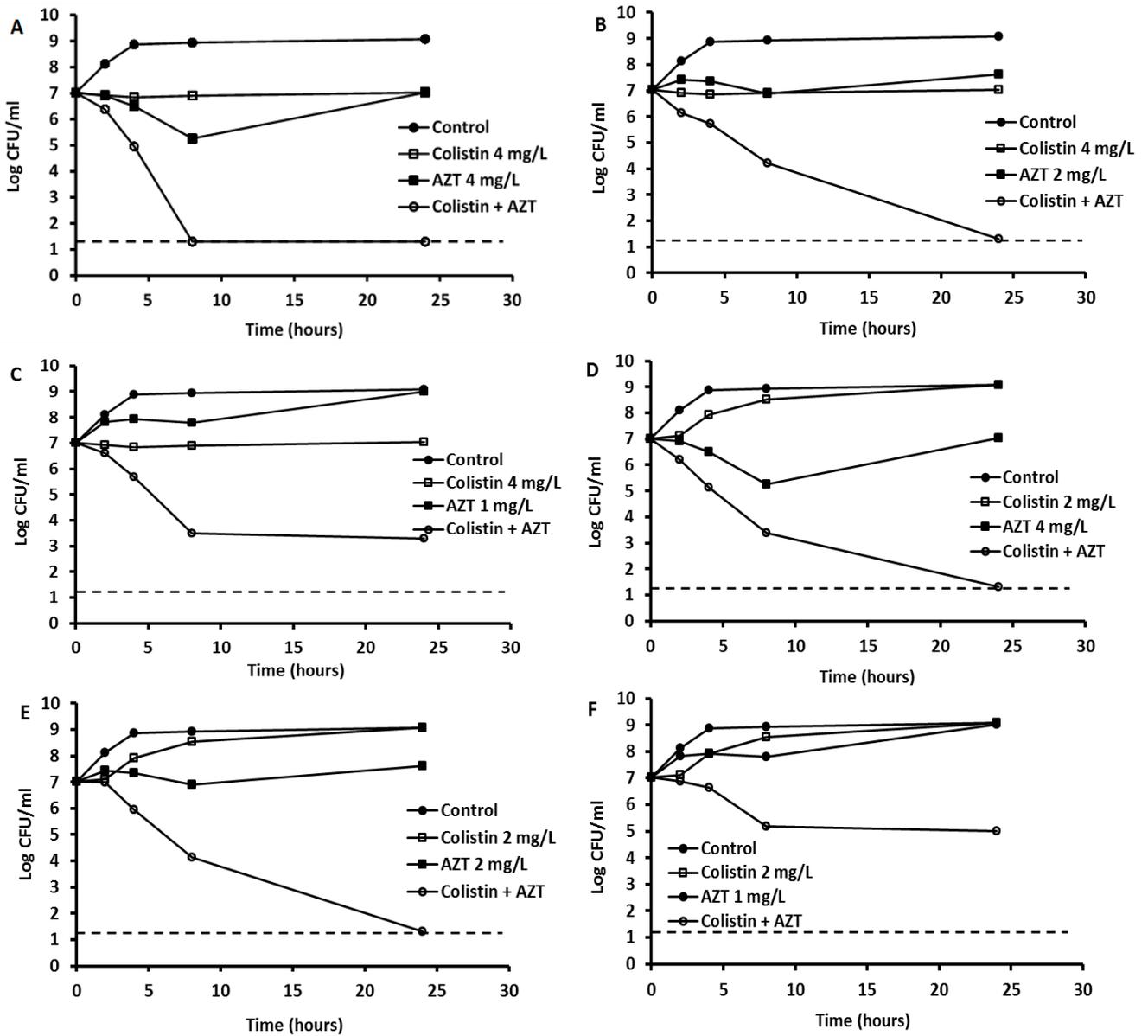


Fig S13. Time Kill analysis showing the effects of AZT in combination with colistin against ESBL *K. pneumoniae* K27. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 4 mg/L + AZT 4 mg/L (A), colistin 4 mg/L + AZT 2 mg/L (B), colistin 4 mg/L + AZT 1 mg/L (C), colistin 2 mg/L + AZT 4 mg/L (D), colistin 2 mg/L + AZT 2 mg/L (E) and colistin 2 mg/L + AZT 1 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

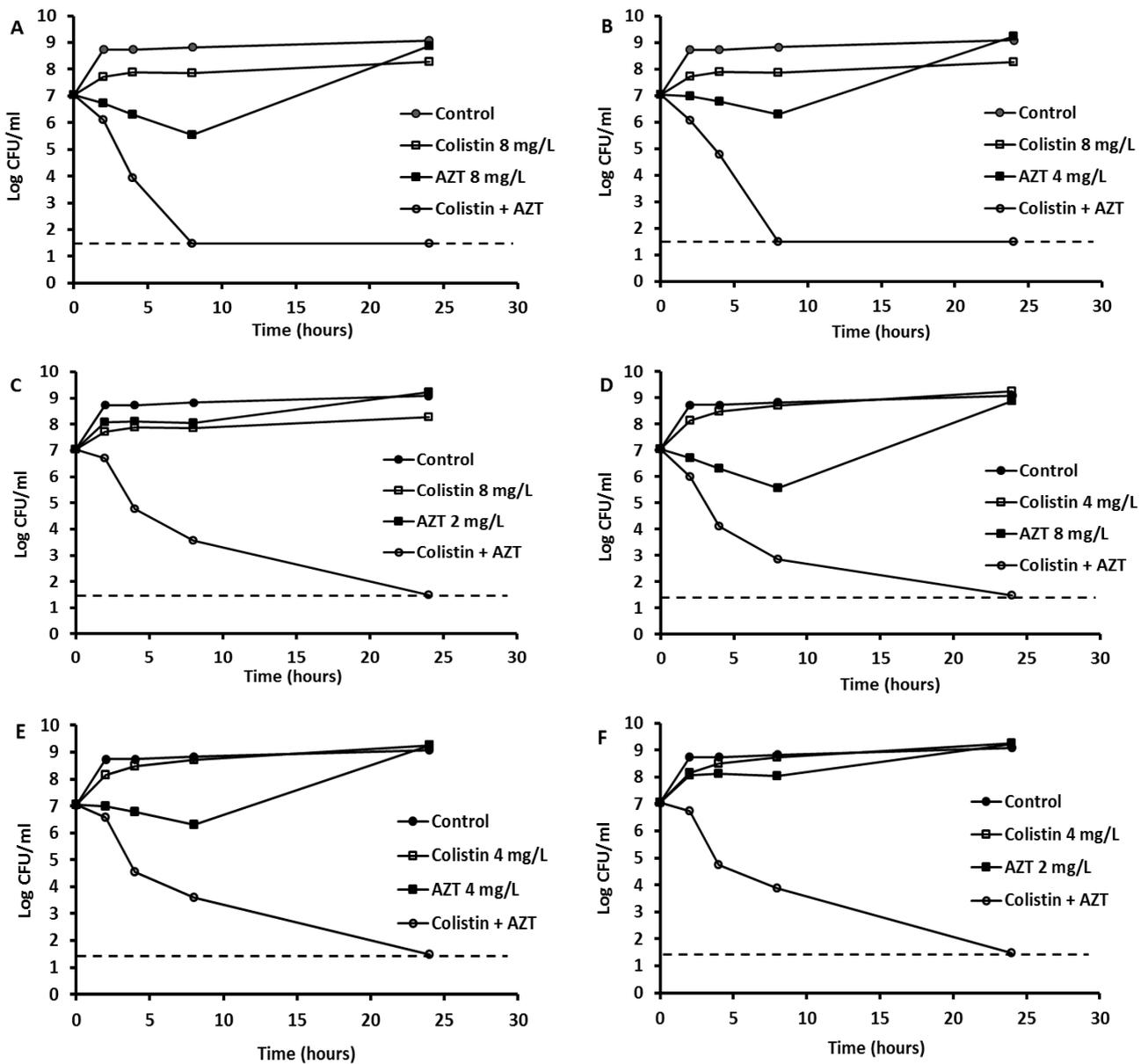


Fig S13. Time Kill analysis showing the effects of AZT in combination with colistin against the *mcr-1 E. coli* Af24. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 8 mg/L + AZT 8 mg/L (A), colistin 8 mg/L + AZT 4 mg/L (B), colistin 8 mg/L + AZT 2 mg/L (C), colistin 4 mg/L + AZT 8 mg/L (D), colistin 4 mg/L + AZT 4 mg/L (E) and colistin 4 mg/L + AZT 2 mg/L (F). The dash line is the limit of detection in the assay (20 CFU/ml).

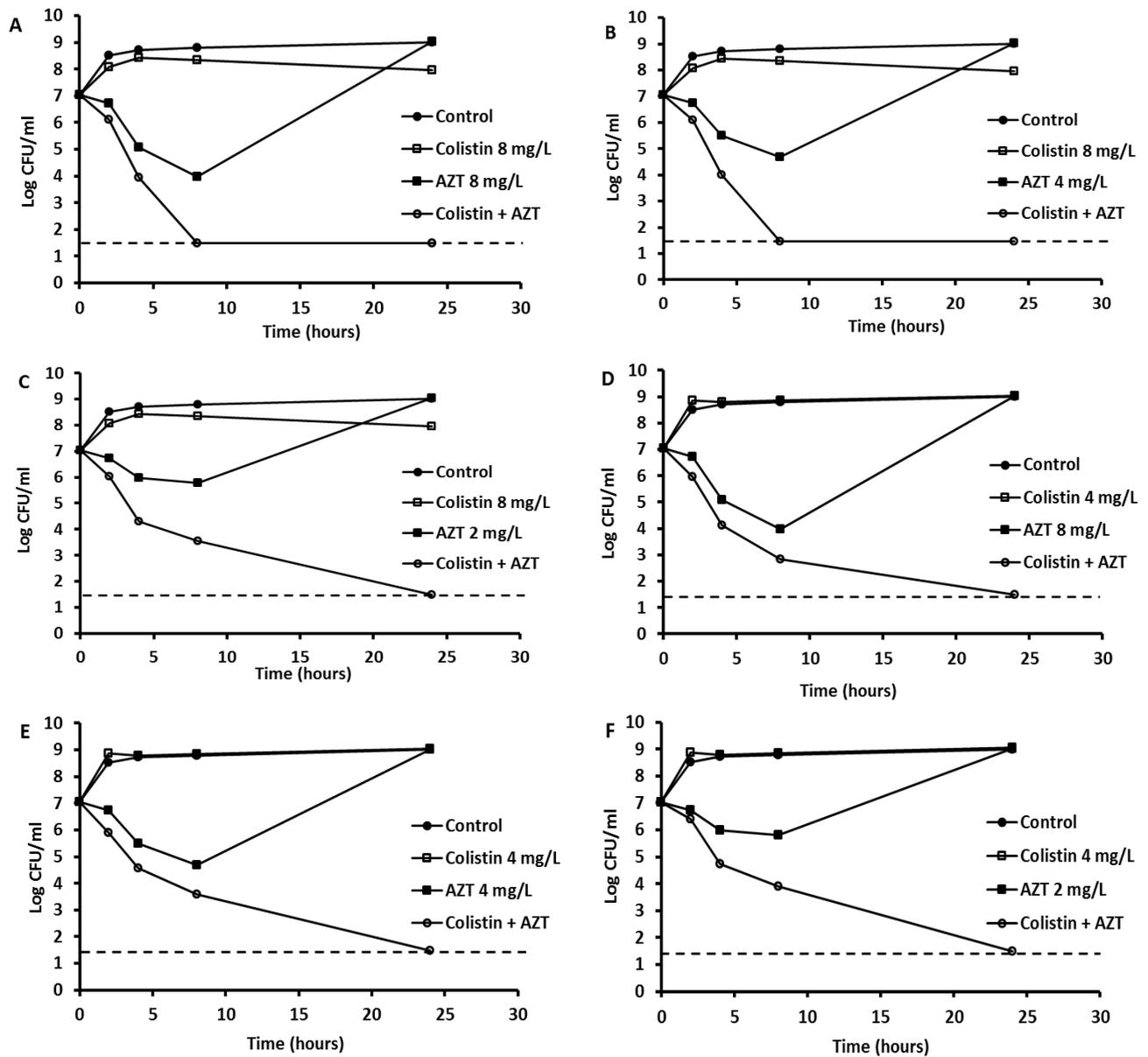


Fig S14. Time Kill analysis showing the effects of AZT in combination with colistin against the *mcr-1* *E. coli* Af31. AZT and colistin alone or in combination were added to the log phase cultures and CFU counts were carried out at different time points. Combination concentrations of AZT and colistin are colistin 8 mg/L + AZT 8 mg/L (A), colistin 8 mg/L + AZT 4 mg/L (B), colistin 8 mg/L + AZT 2 mg/L (C), colistin 4 mg/L + AZT 8 mg/L (D), colistin 4 mg/L + AZT 4 mg/L (E) and colistin 4 mg/L + AZT 2 mg/L (F). The dash line is the limit of detection in the assay (30 CFU/ml).