



Supplementary Materials

Table S1. Primer sequences of targeted resistance genes with their respective amplicon sizes and PCR cycling conditions.

Gene Classification	Target Gene	Primer Sequence (5'-3')	PCR Cycling Condition	Product Size (bp)	References
<i>β-lactam</i>				688	[32]
<i>bla_{CTX-M1}</i>	MultiCTXMGp1_for MultiCTXMGp1-2_rev	TTAGGAARTGTGCCGCTGYA ^b CGATATCGTTGGTGGTRCCAT ^b	94 °C (10 min), 94 °C (40 s), 60 °C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cycles		
<i>bla_{CTX-M2}</i>	MultiCTXMGp2_for MultiCTXMGp1-2_rev	CGTTAACGGCAGCATGAC CGATATCGTTGGTGGTRCCAT ^b	94 °C (10 min), 94 °C (40 s), 60 °C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cycles	404	[32]
<i>bla_{CTX-M9}</i>	MultiCTXMGp9_for MultiCTXMGp9_rev	TCAAGCCTGCCGATCTGGT TGATTCTCGCCGCTGAAG	94 °C (10 min), 94 °C (40 s), 60 °C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cycles	561	[32]
<i>bla_{OXA-1-like}</i>	MultiTSO-O_for MultiTSO-O_rev	GGCACCAGAT- TCAACTTTCAAG GACCCCAAGTTTCCTG- TAAGTG	94 °C (10 min), 94 °C (40 s), 60 °C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cycles	564	[32]
<i>bla_{SHV}</i>	MultiTSO-S_for MultiTSO-S_rev	AGCCGCTTGAG- CAAATTAAAC ATCCCG- CAGATAAATCACCAC	94 °C (10 min), 94 °C (40 s), 60 °C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cycles	713	[32]
<i>bla_{TEM}</i>	MultiTSO-T_for MultiTSO-T_rev	CATTTCGTCGCCCCATTTC CGTTCATCCATAGTT- GCCTGAC	94 °C (10 min), 94 °C (40 s), 60 °C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cycles	800	[32]
<i>bla_{VEB}</i>	MultiVEB_for MultiVEB_rev		94 °C (10 min), 94 °C (40 s), 60 °C (40 s), 72 °C (1	648	[32]

<i>bla_{PER}</i>	MultiPER_for MultiPER_rev	CATTTCCTCGATGCAAAGCGT CGAAGTTTCTTTGGACTCTG	min), 72 °C (7 min) × 30 cycles” “94 °C (10 min), 94 °C (40 s), 57 °C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cy- cles”	520	[32]
		GCTCCGATAATGAAAGCGT TTCGGCTTGACTCGGCTGA			
<i>bla_{GES}</i>	MultiGES_for MultiGES_rev			399	[32]
Carbapenem <i>bla_{VIM}</i>	MultiVIM_for ^c MultiVIM_rev ^c	GATGGTGTGTTGGTCGCATA CGAATGCGCAGCACCAG		390	[32]
		TTGACACTCCATTTACDGB GATYGAGAATTAAGCCA- CYCT ^b	“94 °C (10 min), 94 °C (40 s), 55 °C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cycles”		
	MultiIMP_for MultiIMP_rev	TTGGTGGCATCGATTATCGG GAGC ACTT CTTT TGTG ATGG C	“94 °C (10 min), 94 °C (40 s), 57 °C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cycles”	139	[32]
<i>bla_{OXA-48-like}</i>	<i>bla_{OXA-48-like-F}</i> <i>bla_{OXA-48-like-R}</i>			281	[32]
<i>bla_{NDM-1}</i>	<i>bla_{NDM-1-F}</i> <i>bla_{NDM-1-R}</i>	AAAACGGCAAGAAAAA- GCAG AAAACGGCAAGAAAAA- GCAG	“94 °C (10 min), 94 °C (40 s), 57°C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cy- cles”	231	[32]
	<i>bla_{KPC-F}</i> <i>bla_{KPC-R}</i>		“94 °C (10 min), 94 °C (40 s), 55 °C (40 s), 72 °C (1 min), 72 °C (7 min) × 30 cy- cles”		
<i>bla_{KPC}</i>		AAAACGGCAAGAAAAA- GCAG AAAACGGCAAGAAAAA- GCAG		301	[32]

Quinolones	<i>qnrA</i>	ATTCTCACGCCAGGATTG GATCGGCAAAGGTTAGGTCA	“94 °C (10 min), 94 °C (45 s), 53 °C (45 s), 72 °C (1 min), 72 °C (7 min) × 32 cycles”	448	[33]
	<i>qnrB</i>	GATCGTGAAAGCCAGAAAGG ACGATGCCTGGTAGTTGTCC	“94 °C (10 min), 94 °C (45 s), 53 °C (45 s), 72 °C (1 min), 72 °C (7 min) × 32 cycles”	469	[33]
	<i>qnrS</i>	ACGACATTCGTCAACTGCAA TAAATTGGCACCCCTGTAGGC	“94 °C (10 min), 94 °C (45 s), 53 °C (45 s), 72 °C (1 min), 72 °C (7 min) × 32 cycles”	417	[33]
Aminoglyco- sides	<i>aac(3)-IIa(aacC2)^a</i>	F:CGGAAGGCAATAACGGAG R:TCGAACAGGTAGCACTGAG	“94 °C (5 min), 94 °C (30 s), 50 °C (30 s), 72 °C (1.30 min), 72 °C (5 min) × 30 cycles”	428	[34]
	<i>aadA</i>	F:GTGGATGGCGGCCTGAA- GCC R:AATGCCCAGTCGGCAGCG	“94 °C (4 min), 94 °C (45 s), 50 °C (45 s), 72 °C (45 s), 72 °C (7 min) × 30 cycles”	525	
	<i>strA</i>	F:CTTGGTGATAACGGCAATTC R:CCAATCGCAGATAGAAGGC	“94 °C (4 min), 94 °C (45 s), 50 °C (45 s), 72 °C (45 s), 72 °C (7 min) × 30 cycles”	348	[35]
	<i>aph(3)-Ia(aphA1)^a</i>	F:ATGGGCTCGCGATAATGTC R:CTCACCGAGGCAGTTCCAT	“94 °C (5 min), 94 °C (30 s), 50 °C (30 s), 72 °C (1.30 min), 72 °C (5 min) × 30 cycles”	110	[34]