

Table S1. Distribution of minimal inhibitory concentration (MIC) of *E. coli* strains isolated from organic, antibiotic-free and conventional systems toward the selected antimicrobials.

	Organic		Antibiotic-FREE		Conventional	
Antimicrobials	MIC values		MIC values		MIC values	
Tigecycline	1-4 µg/mL 29.3%	≥ 8 µg/mL 0%	1-4 µg/mL 20.7%	≥ 8 µg/mL 0%	1-4 µg/mL 10.3%	≥ 8 µg/mL 0%
Colistin	>2 µg/mL 0%		>2 µg/mL 0%		>2 µg/mL 0%	
Meropenem	≥16 µg/mL 0%		≥16 µg/mL 0%		≥16 µg/mL 0%	
Cefotaxime	≥4 µg/mL 29.3%		≥4 µg/mL 36.2%		≥4 µg/mL 51.7%	
Ceftazidime	≥8 µg/mL 8.6%		≥8 µg/mL 10.34%		≥8 µg/mL 31.%	
Ampicillin	16-32 µg/mL 0%	≥ 64 µg/mL 72.4%	16-32 µg/mL 0%	≥ 64 µg/mL 70.7%	16-32 µg/mL 0%	≥ 64 µg/mL 84.5%
Nalidixic Acid*	32-64 µg/mL 6.9%	≥ 128 µg/mL 39.7%	32-64 µg/mL 0	≥ 128 µg/mL 58.6%	32-64 µg/mL 0%	≥ 128 µg/mL 56.9%
Ciprofloxacin	1-4 µg/mL 20.7%	≥ 8 µg/mL 19.0%	1-4 µg/mL 19.0%	≥ 8 µg/mL 22.40%	1-4 µg/mL 25.9%	≥ 8 µg/mL 32.7%
Tetracycline*	16-32 µg/mL 36.20%	≥ 64 µg/mL 50.00%	16-32 µg/mL 29.30%	≥ 64 µg/mL 51.70%	16-32 µg/mL 34.50%	≥ 64 µg/mL 43.10%
Azithromycin*	32-64 µg/mL 8.60%	> 64 µg/mL 20.7%	32-64 µg/mL 3.40%	> 64 µg/mL 6.9%	32-64 µg/mL 6.9%	> 64 µg/mL 0%
Gentamicin	4-16 µg/mL 19%	≥ 32 µg/mL 13.8%	4-16 µg/mL 13.8%	≥ 32 µg/mL 8.6%	4-16 µg/mL 5.2%	≥ 32 µg/mL 6.9%
Sulfamethoxazole*	512 µg/mL 5.2%	≥ 1024 µg/mL 77.6%	512 µg/mL 0%	≥ 1024 µg/mL 81%	512 µg/mL 9%	≥ 1024 µg/mL 63.4%
Chloramphenicol	16-64 µg/mL 24.2%	≥ 128 µg/mL 22.4%	16-64 µg/mL 6.9%	≥ 128 µg/mL 31.%	16-64 µg/mL 44.8%	≥ 128 µg/mL 22.4%
Trimethoprim	8-16 µg/mL 17.2%	≥ 32 µg/mL 50%	8-16 µg/mL 6.9%	≥ 32 µg/mL 55.2%	8-16 µg/mL 5%	≥ 32 µg/mL 58.8%

* based on the CLSI clinical breakpoint.

Table S2. Resistance patterns in *E. coli* isolated from antibiotic-free (AF) organic (O), and conventional (C) samples.

System													
AF						O							
C						Antimicrobial Resistance Pattern							
AF						O							
C						Antimicrobial Resistance Pattern							
Pattern	<i>E. coli</i> (No)		%		<i>E. coli</i> (No)		%		<i>E. coli</i> (No)		%		
2	3	5.10%	1	1.70%	1	1.70%	BL/QUIN	2	3.40%	0	0.00%	0	0.00%
							TGC/CHL	0	0.00%	1	1.70%	0	0.00%
							TET/AZI	1	1.70%	0	0.00%	0	0.00%
							BL/CHL	0	0.00%	0	0.00%	1	1.70%
3	8	13.60%	4	6.80%	8	13.60%	BL/CN/TMP	0	0.00%	1	1.70%	0	0.00%
							BL/QUIN/TMP	0	0.00%	0	0.00%	1	1.70%
							BL/QUIN/TET	0	0.00%	0	0.00%	3	5.10%
							BL/QUIN/SMX	0	0.00%	0	0.00%	1	1.70%
							BL/SMX/TMP	1	1.70%	0	0.00%	0	0.00%
							BL/SMX/CHL	1	1.70%	0	0.00%	1	1.70%
							TGC/BL/TET	1	1.70%	0	0.00%	0	0.00%
							TGC/QUIN/TET	1	1.70%	0	0.00%	0	0.00%
							SMX/CHL/TMP	1	1.70%	0	0.00%	1	1.70%
							TGC/SMX/CHL	0	0.00%	0	0.00%	1	1.70%
							TET/AZI/SMX	1	1.70%	0	0.00%	0	0.00%
							TET/AZI/TMP	1	1.70%	0	0.00%	0	0.00%
							TET/SMX/TMP	0	0.00%	3	5.10%	0	0.00%
							TET/SMX/CHL	1	1.70%	0	0.00%	0	0.00%
							BL/QUIN/CN/SMX	1	1.70%	0	0.00%	0	0.00%
							CN/SMX/CHL/TMP	1	1.70%	0	0.00%	0	0.00%
							BL/QUIN/TET/TMP	0	0.00%	1	1.70%	1	1.70%
							BL/QUIN/SMX/TMP	0	0.00%	1	1.70%	0	0.00%
							BL/QUIN/TET/SMX	2	3.40%	1	1.70%	3	5.10%
							BL/SMX/CHL/TMP	0	0.00%	2	3.40%	1	1.70%

4	10	17.00%	12	20.40%	7	13.60%	BL/TET/SMX/CHL	1	1.70%	0	0.00%	1	1.70%
							BL/TET/SMX/TMP	3	5.10%	1	1.70%	2	3.40%
							QUIN/TET/CN/SMX	0	0.00%	1	1.70%	0	0.00%
							QUIN/TET/SMX/CHL	0	0.00%	1	1.70%	0	0.00%
							QUIN/TET/SMX/TMP	1	1.70%	0	0.00%	0	0.00%
							TGC/BL/TET/SMX	0	0.00%	1	1.70%	0	0.00%
							TGC/BL/CN/SMX	0	0.00%	1	1.70%	0	0.00%
							TGC/TET/AZI/TMP	0	0.00%	1	1.70%	0	0.00%
							TET/AZI/SMX/TMP	0	0.00%	1	1.70%	0	0.00%
							TGC/TET/SMX/TMP	1	1.70%	0	0.00%	0	0.00%
5	13	22.10%	18	30.60%	17	28.90%	BL/QUIN/CN/SMX/TMP	0	0.00%	1	1.70%	0	0.00%
							CN/QUIN/TET/SMX/TMP	0	0.00%	0	0.00%	1	1.70%
							BL/QUIN/TET/CN/CHL	0	0.00%	1	1.70%	0	0.00%
							BL/QUIN/TET/CN/TMP	1	1.70%	0	0.00%	0	0.00%
							BL/QUIN/SMX/CHL/TMP	0	0.00%	0	0.00%	1	1.70%
							BL/QUIN/TET/CN/SMX	1	1.70%	1	1.70%	0	0.00%
							BL/QUIN/TET/CHL/TMP	0	0.00%	0	0.00%	4	6.80%
							BL/QUIN/TET/SMX/CHL	1	1.70%	1	1.70%	4	6.80%
							BL/QUIN/TET/SMX/TMP	6	10.20%	3	5.10%	1	1.70%
							BL/TET/CN/SMX/CHL	0	0.00%	1	1.70%	0	0.00%
							BL/TET/CN/SMX/TMP	1	1.70%	0	0.00%	0	0.00%
							BL/TET/SMX/CHL/TMP	1	1.70%	3	5.10%	4	6.80%
							BL/TET/AZI/CHL/TMP	0	0.00%	0	0.00%	1	1.70%
							TGC/BL/QUIN/TET/AZI	0	0.00%	2	3.40%	0	0.00%
							TGC/BL/QUIN/TET/TMP	0	0.00%	0	0.00%	1	1.70%
							TGC/BL/QUIN/TET/SMX	1	1.70%	0	0.00%	0	0.00%
							TGC/BL/TET/AZI/CHL	0	0.00%	1	1.70%	0	0.00%
							TGC/BL/TET/CN/TMP	0	0.00%	1	1.70%	0	0.00%
							TGC/TET/CN/SMX/TMP	0	0.00%	1	1.70%	0	0.00%
							TGC/BL/TET/SMX/TMP	1	1.70%	0	0.00%	0	0.00%

							TGC/TET/AZI/SMX/TMP	0	0.00%	1	1.70%	0	0.00%
							TET/AZI/SMX/CHL/TMP	0	0.00%	1	1.70%	0	0.00%
							BL/QUIN/TET/CN/SMX/CHL	0	0.00%	0	0.00%	1	1.70%
							BL/QUIN/TET/CN/SMX/TMP	3	5.10%	2	3.40%	0	0.00%
							BL/QUIN/TET/AZI/CN/SMX	0	0.00%	2	3.40%	0	0.00%
							BL/QUIN/TET/AZI/SMX/CHL	0	0.00%	1	1.70%	0	0.00%
							BL/QUIN/TET/AZI/SMX/CHL	1	1.70%	0	0.00%	0	0.00%
							BL/QUIN/TET/SMX/CHL/TMP	7	11.90%	5	8.50%	8	13.60%
6	14	23.80%	14	23.80%	10	17.00%	BL/QUIN/TET/AZI/SMX/TMP	0	0.00%	1	1.70%	0	0.00%
							TGC/BL/QUIN/TET/SMX/CHL	1	1.70%	0	0.00%	1	1.70%
							BL/QUIN/TET/AZI/SMX/TMP	0	0.00%	1	1.70%	0	0.00%
							TGC/BL/TET/AZI/SMX/CHL	0	0.00%	1	1.70%	0	0.00%
							TGC/BL/QUIN/TET/SMX/TMP	1	1.70%	0	0.00%	0	0.00%
							TGC/QUIN/TET/AZI/SMX/CHL	0	0.00%	1	1.70%	0	0.00%
							TGC/TET/AZI/SMX/CHL/TMP	1	1.70%	0	0.00%	0	0.00%
							TGC/BL/QUIN/TET/CN/SMX/CHL	0	0.00%	1	1.70%	0	0.00%
							BL/QUIN/TET/CN/SMX/CHL/TMP	2	3.40%	3	5.20%	7	12.10%
7	5	8.70%	6	10.20%	8	13.60%	TGC/BL/QUIN/TET/AZI/SMX/CHL	1	1.70%	0	0.00%	0	0.00%
							TGC/BL/QUIN/TET/SMX/CHL/TMP	2	3.40%	1	1.70%	1	1.70%
							TGC/QUIN/TET/AZI/CN/SMX/TMP	0	0.00%	1	1.70%	0	0.00%
							BL/QUIN/TET/AZI/CN/SMX/CHL/TMP	0	0.00%	1	1.70%	0	0.00%
8	1	1.70%	2	3.40%	1	1.70%	TGC/BL/QUIN/TET/CN/SMX/CHL/TMP	0	0.00%	1	1.70%	0	0.00%
							TGC/BL/QUIN/TET/AZI/CN/SMX/TMP	1	1.70%	0	0.00%	0	0.00%
							TGC/BL/QUIN/TET/AZI/SMX/CHL/TMP	0	0.00%	0	0.00%	1	1.70%

BL = beta-lactams (MERO, FOT, TAZ, AMP); QUIN = quinolones (CIP, NA), SMX = sulfamethoxazole, TET = tetracycline, CN = gentamicin, TGC = tigecycline, AZI = azitromycin, CHL = chloramphenicol, TMP = trimethoprim.