

Table: Regional Distribution of Antimicrobial Susceptibility Testing (AST) *E. coli*.

Region	Total Samples	Resistant Samples	Resistance Rate (%)	Antibiotic Resistance (% of total)
North	170	26	15.3%	AMC: 18% CTX: 12% CRO: 14% CAZ: 10% CN: 8% AK: 6% CL: 22% CXM: 15% SXT: 20% MEM: 2% DOX: 25%
Middle	165	37	22.4%	AMC: 22% CTX: 19% CRO: 20% CAZ: 17% CN: 12% AK: 10% CL: 28% CXM: 18% SXT: 25% MEM: 4% DOX: 32%
South	165	56	33.9%	AMC: 30% CTX: 25% CRO: 27% CAZ: 24% CN: 18% AK: 15% CL: 35% CXM: 22% SXT: 30% MEM: 6% DOX: 40%
Total	500	119	23.8%	AMC: 23.3% CTX: 18.7% CRO: 20.3% CAZ: 17% CN: 12.7% AK: 10.3% CL: 28.3% CXM: 18.3% SXT: 25% MEM: 4% DOX: 32.3%

Abbreviations:

Antibiotic	Abbreviation / Code	Disc Concentration (µg)
Amoxicillin-clavulanic acid	AMC	20/10
Cefotaxime	CTX	30
Ceftriaxone	CRO	30
Ceftazidime	CAZ	30
Gentamicin	CN	10
Amikacin	AK	30
Cephalexin	CL	30
Cefuroxime	CXM	30

Antibiotic	Abbreviation / Code	Disc Concentration (µg)
Co-trimoxazole (Trimethoprim-Sulfamethoxazole)	SXT	25
Meropenem	MEM	10
Doxycycline	DOX	30

Table: ESBL Phenotypic Detection in *E. coli* Using Double Disk Synergy Test (DDST) and Methodology

Region	Antibiotic-Resistant Isolates	ESBL+ Isolates (DDST)	ESBL Detection Rate (%)	Test Description
North	26	17	65.4%	Discs of Amoxicillin/Clavulanic Acid (AMC) placed centrally, with Cefotaxime (CTX), Ceftazidime (CAZ), and Ceftriaxone (CRO) spaced 20 mm edge-to-edge.
Middle	37	27	73.0%	ESBL confirmed if synergy (enhanced inhibition zone) observed between AMC and any 3GC disc after 24h at 37°C.
South	56	46	82.1%	Positive control: <i>K. pneumoniae</i> ATCC 700603; Negative control: <i>E. coli</i> ATCC 25922.
Total	119	90	75.6%	Method modified from Dalela et al., 2012. Synergy interpreted as ESBL production.