



IDENTIFICATION AND ANTIMICROBIAL SUSCEPTIBILITY TESTING OF *ESCHERICHIA COLI* FROM POULTRY MEAT

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INTRODUCTION

Poultry meat is considered one of the most consumed sources of protein worldwide due to many benefits, *inter alia*, affordability, delicious taste, quality of nutrition. worldwide (Wahyono & Utami, 2018). Due to its qualities, it serves as conducive environment for pathogenetic organisms such as *Escherichia coli* (*E. coli*), a common bacterium found in the intestines of animals and humans. This research aims to check the antimicrobial susceptibility of *E. coli* isolates from poultry in the Shashie District of the Greater Accra Region, Ghana.

OBJECTIVES

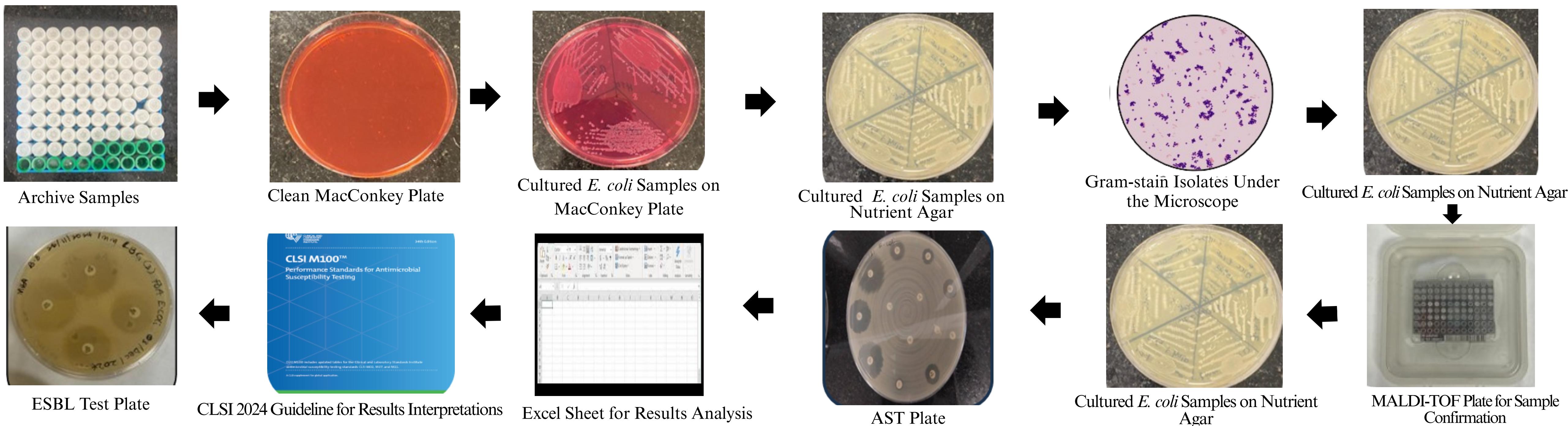
MAIN OBJECTIVES

- To identify *E. coli* isolates and evaluate their antimicrobial susceptibility profile.

SPECIFIC OBJECTIVES

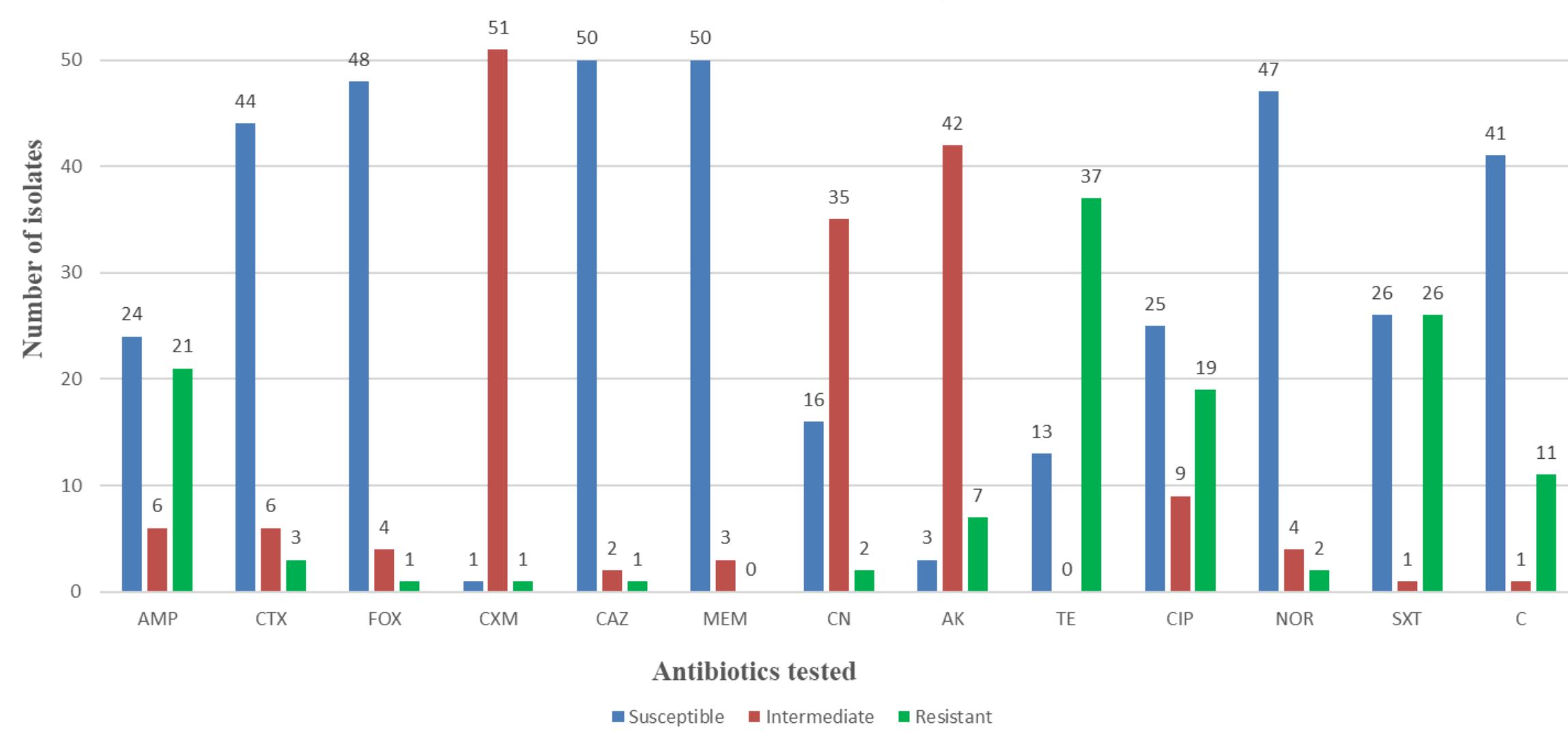
- To determine the susceptibility of *E. coli* against antimicrobial agents.
- To assess the presence of extended-spectrum beta-lactamase (ESBL) production in the isolated strain.

METHODOLOGY

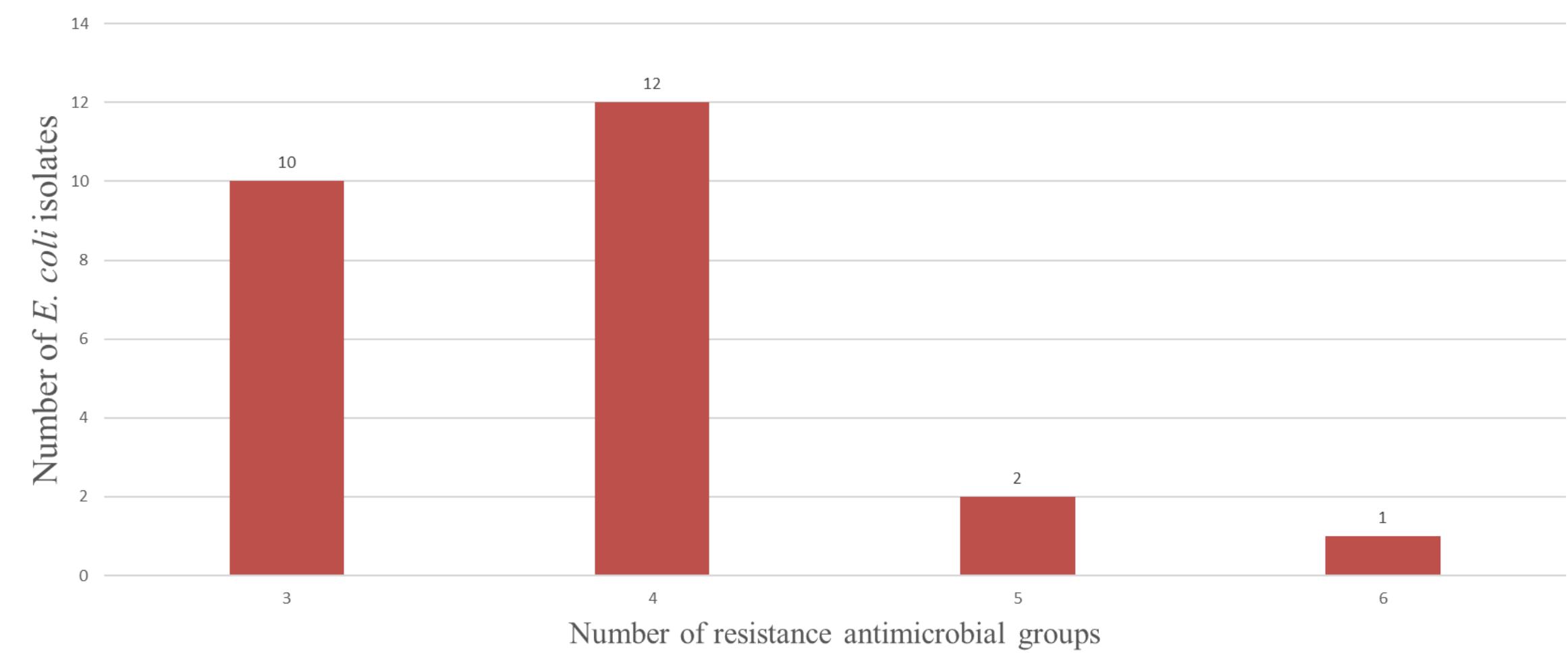


RESULTS

Antimicrobial Resistance Profile among *E. coli* Isolates (n= 53)



Graph of Multidrug Resistant Isolates Against Number of Antibiotic Groups



DISCUSSION

- The study "Antimicrobial Resistance of *Escherichia coli* from Broilers, Pigs, and Cattle in the Greater Kumasi Metropolis, Ghana", (Ohene Larbi, R., et al., 2021) out of a total number of 48 *E. coli* isolates from broilers, 95.7% were resistant to both Tetracycline and Trimethoprim, 80.9% were resistant to Ampicillin.
- The resistance rates of *E. coli* isolates were high for Tetracycline (69.8%), Sulfamethoxazole-trimethoprim (49.1%), Ampicillin (39.6%), and Ciprofloxacin (35.8%). However, the *E. coli* isolates tested were found to be susceptible to Meropenem (94.3%), Ceftazidime (94.3%), Norfloxacin (88.7%), and Chloramphenicol (77.4%).

CONCLUSION AND RECOMMENDATION

- Antimicrobial susceptibility tests revealed multidrug-resistant *E. coli*, with resistance to commonly used antibiotics like tetracycline and ampicillin and concerning intermediate resistance to CXM, AK, and CN, highlighting a growing public health threat.
- The use of these antibiotics should be regulated by limiting their availability, establishing clear guidelines for their application, and promoting public education on the importance of proper sanitation practices in poultry production and their implications for public health.

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