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# Antimicrobial Residue (AMR) in cattle Meat in Chattogram Metropolitan Area, Chattogram, Bangladesh



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# **Antimicrobial Residue (AMR) in cattle Meat in Chattogram Metropolitan Area, Chattogram, Bangladesh**



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## CONTENTS

Content	Page
List of tables.....	IV
List of figures.....	IV
Abstract.....	V
Chapter 1: Introduction.....	01
Chapter 2: Materials and Methods	
2.1 Study area.....	03
2.2 Collection of sample.....	03
2.3 Transport of sample.....	03
2.4 sample preparation .....	03
2.5 selection of antibiotic and preparation f standard	
2.6 Preparation of silica plates .....	04
2.7 Thin Layer Chromatography (TLC).....	04
2.8 Pointing running and detection .....	05
Chapter3: Result.....	06
Chapter4: Discussion.....	09
Chapter5: Conclusion.....	12
Acknowledgement.....	13
References.....	14
Biography.....	15

**List of tables**

Table	Content	Page
Table1:	Number of positive and negative test sample.....	08

**List of figures**

Figure	Content	Page
Figure1:	Total positive and negative sample.....	09
Figure2:	Positive samples according to Antibiotics.....	09
Figure3:	Percentage of residue in positive sample.....	10

## Abstract

Antimicrobials are administered in food animals for two purpose; therapy against bacterial pathogens and for promoting muscle development. Residues of these substances may remain in meat and may pose a real threat to the consumer either through exposure to the residues, transfer of antibiotic resistance or allergy risk. This has exerted a great concern among researchers, clinicians and consumers worldwide. The present study was conducted for the detection of antibacterial residues in cattle muscle and liver. Thin Layer Chromatography (TLC) method was used for detection of the presence of Oxytetracycline, Amoxicillin, Ciprofloxacin, Gentamycin and Cephalosporine residues in muscle and liver tissues. Samples (N=50) of cattle meat (muscles and liver) were collected from different market of Chattogram Metropolitan Area during the period of February, 2019 to March, 2019. The samples were extracted with trichloroacetic acid (30%), diethyl ether, followed by detection in pre-coated TCL paper on UV detector. Antibiotic residues were detected in 10% cattle meat. The residues of oxytetracycline were found in 4% of liver sample and 2% of muscle sample. Observance of withdrawal period, active surveillance, modern analytical techniques and expert for residue analysis, monitoring and control on the use of veterinary drugs are highly recommended for public health safety.

Key words: Thin Layer Chromatography (TLC), antibiotics, residues