

Analysis of Antibiotics from Selected Steak and Stomach Bowels from Goat, Sheep and Cattle in Narok County, Kenya

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Abstract

In modern day life some of the diseases affecting people are related to food. Mostly, humans are exposed to Antibiotic residues through taking meat. Resistant bacteria from animals can spread to people making them develop certain antibiotic resistance. Antibiotics are known to kill / inhibit growth of bacteria to prevent infections. Taking antibiotics too often directly or in animals or humans develop antibiotic resistance. Antibiotics residues in animal meat occurs as result of animal feeds containing antibiotics for growth promotion and also antibiotics that are used for treatment of or prevention of bacterial infection. This research intended to analyze Antibiotics present in meat in Narok town and thereafter certain measures were recommended too general a statement, the reader wishes to know the recommendations based on your findings, hence this statement should follow after you share the major results in this abstract. Antibiotics were analyzed by Ultra Performance Liquid Chromatography- Mass spectrometer/Mass spectrometer (UPLC-MS/MS). Data obtained were analyzed by SPSS Statistical package and Ms. Excel. Some of the antibiotics found in limits well above those recommended by WHO included Sulfapyridine, Sulfadiazine, Norfloxacin and nalidixic acid. The animal which had highest traces of antibiotics was Sheep- steak as shown Sulfapyridine 391 ppb, Sulfadiazine 131 ppb, and Norfloxacin 4062 ppb. Goat- *matumbo* was Sulfapyridine 428 ppb, Sulfadiazine 208 ppb, and Norfloxacin 4098 ppb. According to WHO the recommended levels of antibiotic residues are 200 mg/kg for muscles, 600mg/kg for liver. This the amount of antibiotics residue can be ingested or taken over lifetime without detectable health effects. Due to high traces of antibiotics in meat the following measures are recommended proper cooking of meat to the required temperature and in required time. Another measure is avoiding use of antibiotics for growth promotion or to prevent diseases in animals that are healthy instead animals should be vaccinated to reduce the need for antibiotic so as to prevent antibiotic resistance.

Key words: Antibiotics resistance, Antibiotics, Meat, Livestock