

### ABSTRACT:

Food materials of poultry feeds utilized in elevating poultry birds. This is the best and greatly widely eating meat in the world, considered about above than 50% of the world meat. The disorders of poultry is like the disorders of others animals. Perhaps it was effected by pathogenic organisms, healthy defect and from injury. This research was formulated and accomplished to specify the size of bacteria which was polluting poultry feeds and basis of feeds inside poultry plantation and other market feeds. Isolation that were identified according to their cultural, microscopic and biochemical properties to the consequently gram negative bacteria as such as *Proteus spp*. It is assumed that poultry feeds, specifically those inside farms are surrounding with hazardous materials or sheltering probable pathogenic bacteria and fungi sizes that are far above the favorable levels for production of poultry feeds, thus add-up-to a public health hazard and necessitate the application of the common criteria for production of feeds by factories and health administrations. Therefore, the research approves that uninfected output of poultry feed is a public health problem, adequate handling of feed components and application of hygienic criteria such as HACCP, beginning from breeding of feed ingredients to the storehouse, processing of feeds, packaging, transporting and ultimately commerce of the bagged feeds is desire of the hour.

## Methods and Materials

- The sample was collected from local market in Karachi.
- The samples was collected from locations (market), sample were mixed thoroughly and put in a sterilized polythene packets with a proper labeled named and then taken to the laboratory for analysis and processed as soon as possible.
- Prepared 10ml peptone broth tube.
- Dispense the medium in 10 ml amounts in screw-cap bottles. Take a weighing machine and weigh a sample (Poultry feed) 1gm. Then inoculate a 1gm sample in a peptone broth tube. Incubate the tube in an incubator at 37C for 24hours
- Prepared a nutrient agar plate.
- Suspend 28 g of nutrient agar powder in 1 litre of distilled water, heat the mixture and allow it to solidify. Take a loop full culture on the tube. Then streak on nutrient agar plate. Incubate the plate in an incubator at 37C for 24hours. Next day observe the growth of organisms.
- Perform gram staining.
- Take a TSI tube and a set of sugar tubes (Glucose, Lactose, Mannitol, Sucrose) and IMVIC set tubes. Inoculate the culture in all set of tubes.
- Take MHA plate for antibiotic sensitivity. Take a susceptible antibiotics which are Imipenam, Gentamycin, Ciprofloxacin, Aztreonam, Piperacillin. With the help of forcep placed an antibiotics on MHA plate. Then incubate the plate in an incubator at 37C for 24hours.

## Results

TABLE # 1 Morphological characteristics of isolated microorganism

Shape	Size	Arrangement	Motility	Flagella	Spores	Capsule	Gram reaction
Short rod	1-3 µm x 0.5 µm (micrometer)	Singly or in pairs	Swarming growth	Peritrichous flagella	Non-spore forming	not present	negative

TABLE # 2 cultural characteristics of isolated microorganism

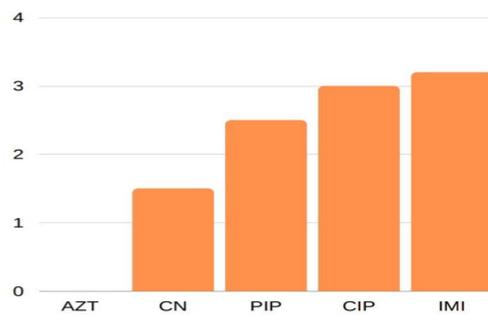
Cultural characteristics	Nutrient agar	MacConkey agar
SHAPE	Regular or irregular (due to swarming)	circular
SIZE	1-2 mm	2-3 mm
ELEVATION	Effuse	Low convex
SURFACE	Glistening	smooth
COLOR	Greyish white	Colorless or pale color
STRUCTURE	Translucent	Transparent
HEMOLYSIS	No hemolysis	No hemolysis

TABLE # 3 Biochemical characteristics of isolated microorganism

Carbohydrate fermentation				IMVIC				TSI Agar slant			Identified organism	
G	L	M	S	I	M	V	C	Butt	Slope	Gas	H <sub>2</sub> S	
+	+	-	-	+	+	-	+	Acidic	Acidic	+	+	<i>Proteus vulgaris</i>

Figure 1. Label in 28pt Calibri.

### Antibiotic sensitivity test



## Discussion

The socio-economic and health implication of these findings are enormous. Economically, the presence of these bacteria and fungi genera has been reported to overwhelmingly affect the viability of some animal husbandry undertaking and agriculture in general. With the high colonization of bacteria and fungi of public health concern in poultry feeds, good manufacturing practice, handling and retailing methods need to be improved to enhance the microbiological quality of these products. The safety of poultry products for human consumption is a World Health Organization requirement. Microbial contamination of poultry feed is a significant potential pathway for entry of pathogens into human food supply. This study was designed and carried out to determine the loads and types of fungi and bacteria contaminating poultry feeds from different sources. These sources are the main sectors dealing with poultry feeds. Although feeds from farms and those from markets seem to have similar contamination, but they were considered separately due to the effect of storing time and conditions (humidity and temperature) in the markets. This study revealed that analysed and time factor did not affect the bacterial isolate as in the poultry feed and this corroborates the report of studies carried out elsewhere. The high level of bacteria obtained in this study can be associated with the high level of contaminated water activity of animal feed and the physiology of contaminating bacterial genera. Animal feeds have been listed as one of the sources of microbes of farmed animals and poultry.

## Conclusions

In conclusion, *Proteus spp* (*Proteus vulgaris*) were isolated and identified from poultry feeds and this is of concern because of the health hazards they present to the value chain actors. The bacteria counts obtained in this study were high and indicated the need for improved sanitary.

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