

Microbiological quality and safety of *Rastrineobola argentea* retailed in Kisumu town markets, Kenya.

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OBJECTIVE:

To investigate faecal contamination and safety of *Rastrineobola argentea* sold in retail markets in Kisumu town.

DESIGN:

This was a repeated cross sectional study and based on random sampling. Setting: Kisumu city, targeting six markets; Oile, Jubilee, Kibuye, Kondele, Nyalenda and Manyatta.

RESULTS:

A total of 60 fish samples were analysed. All the fish were found to be contaminated with *E. coli*, and in addition 6.67% of the fish products tested positive for *Salmonella*. *Shigella* was absent in all samples analysed. 26.53% of *E. coli* isolates tested were resistant to two or more antimicrobial agents tested, with the highest level of resistance detected against cotrimoxazole at 38.76%. The *E. coli* multiple antibiotic resistance (MAR) index was 0.084 indicating that the contamination was not originating from a high-risk source. A plasmid of approximately 5.6 kb was commonly isolated from *E. coli* isolates that showed resistance to ampicillin. Plasmids isolated were not transferable by conjugation.

CONCLUSION:

The presence of *Salmonella* spp and occurrence of MDR *E. coli* were identified as some of the possible health risks that may be associated with *R. argentea* displayed for sale in Kisumu city markets. This possess a real health risk through consumption or directly through contact with the fish products.