

## 9. Microbiological quality of *kachumbari*, a raw vegetable salad popularly served alongside roast meat in Kenya

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### Abstract

Raw salads are regularly implicated in foodborne disease outbreaks globally. Consumption of *kachumbari*, a raw vegetable salad alongside roast meat is widespread in Kenya. This study aimed to evaluate the bacteriological quality of *kachumbari* samples (n=39) collected from a cross-section of roasted meat eateries in Kenya. United Kingdom's Health Protection Agency guidelines were used to infer the safety of the salads due to the lack of local criteria for microbiological safety of ready-to-eat fresh produce placed in the market. Based on *Escherichia coli* counts, 14 (35.9%) of the samples were of satisfactory microbial quality (<20 CFU/g), 7 (17.9%) in the borderline (20 - ≤10<sup>2</sup> CFU/g) and 18 (46.2%) unsatisfactory (>10<sup>2</sup> CFU/g). All samples examined for *Staphylococci* had counts falling within the borderline range (20-≤10<sup>4</sup> CFU/g). Collectively, 3 (7.7%) of the sampled salads were classified as potentially harmful to health and/or unfit for human consumption due to the presumptive presence of *Campylobacter* spp. 2 (5.1%) and *E.coli* O157 1 (2.6%). *Salmonella* was not detected in any of the samples. The presence of hygiene indicator microorganisms and pathogens demonstrates that *kachumbari* salads present a public health risk.

**Keywords:** *Kachumbari*, hygiene indicators, foodborne pathogens, raw vegetable salad