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Occurrence of *Clostridium perfringens* in meat curries available in eating houses in the city of Colombo, Sri Lanka

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Ensuring safe consumption of food without food-borne pathogens is of prime importance in public health across the globe. Spicy and hot meat curries are much popular among Sri Lankans as a main dish served with rice, bread, string hoppers, hoppers, roti and pittu. Aim of this study was to assess the safety in consuming meat curries available for sale in eateries in Colombo city by assessing the presence of *Clostridium perfringens*, that is frequently found in meat curries and meat-based dishes and to investigate the common preventive measures taken against contamination. One hundred (100) eateries were selected randomly as a representative sample of 572 eating houses registered in the Colombo Municipal Council. Subsequently, total of 200 samples comprising 100 chicken and 100 beef curries, were purchased from the randomly the selected eateries. Meat curry samples were processed immediately after collection. Plate counts based on Tryptose Sulfite Cycloserine (TSC) medium and presumptive identification and confirmation tests were employed for isolation and enumeration (Bacteriological Analytical Manual, 2001). *C. perfringens* was detected in 78 (39%) of meat curry samples, 47 (47.0%) chicken curry samples and 31 (31.0%) beef curry samples. Chicken curries significantly harboured ($p < 0.05$), *C. perfringens* due to under cooking which facilitates germination of heat resistant endospores which may proliferate vegetative cells during the prolonged storage at room temperature (at 30°C).

Keywords: *Clostridium perfringens*, Colombo city, Meat curry samples, Tryptose Sulfite Cycloserine, eat resistant endospores