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Proliferation and contamination of campylobacter jejuni recovered from frozen buffalo meat in New Delhi, India

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Prior to 1970 Campylobacter, known to veterinary microbiologist as a causative agent of spontaneous abortions in cattle and sheep along with other animals. Positively C. jejuni is isolated from frozen bovine meat according to Stern et al. Campylobacter jejuni is microaerophilic, produces heat labile enterotoxin, can cause in human campylobacteriosis with symptoms of meningitis, pneumonia, miscarriage and a severe form of Guillain - Barré syndrome, non-life threatening, diarrhoea to mimicking acute appendicitis. Microscopically C. jejuni is gram negative rods with comma shaped. This research finds the result, out of 61 samples of frozen buffalo meat 49 samples found positive and 12 samples negative for C. jejuni in frozen condition. Campylobacter Agar Base with charcoal and sheep blood exhibit thick translucent white or gray or colorless growth to spreading, film-like transparent flat or moist growth at 37oC and 42oC for 2-5 days. Antibiotic assay test revealed C. jejuni more sensitive to 10µg amoxiclav and little sensitive or resistant to 5µg methicillin. Approximately other sources of contamination and risk assessment tested at Abattoir like air-out of 25 samples, 100% samples are positive, out of 25 samples of water 35% samples are positive, out of 25 samples of slaughter instrument 100% are positive and food handlers hand swab out of 25 samples 100% are positive. Therefore, the tolerances are very high in frozen buffalo meat and resulted due to unhygienic practice at abattoir, processing of buffalo meat and create food borne diseases which decreases quality and increases the level of risk of food borne disease.

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