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Comparison of culture procedures for improving the detection method of Yersinia enterocolitica in food

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Yersinia enterocolitica is a gram negative bacillus-shaped, facultative anaerobe that is found in meats (pork, beef, lamb, etc.), contaminated water and raw milk. *Y. enterocolitica* is motile at temperatures ranging from 22 to 30°C and then it can flourish in lower temperatures, even below 4°C. Therefore, it can survive freezing and inhabit frozen foods for a long period of time. In the present study, we carried out to evaluate the effectiveness of two different enrichment culture procedures for the isolation of *Y. enterocolitica*. We also used two strains of *Y. enterocolitica* (NCCP10246 and NCCP11129). Two strains were spiked in frozen blueberry, corn salad, cream cheese and quail egg and used in the experiment. The first method used peptone sorbitol bile broth (PSBB) for 10 days at 10□ by following FDA Bacteriological Analytical Manual (BAM) and Korean Food Code. The second method used irgasan ticarcillin chlorate (ITC) broth for two days at 25□ and peptone sorbitol bile broth (PSBB) for 5 days at 25□ by following USDA Food Safety and Inspection Service (FSIS) and International Organization for Standardization (ISO). Following the different enrichment procedures, two selective media, KOH-treated cefsulodin irgasan novobiocin (CIN) agar and Salmonella shigella desoxycholate citrate (SSDC) agar were used and each culture methods were analyzed using detection limit. Recovery of *Y. enterocolitica* was not significantly different between two methods.

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