

Prevalence of *Listeria monocytogenes* in Raw Milk and Dairy Products in Pannala Veterinary Division

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Listeriosis is a severe foodborne disease caused by the consumption of contaminated food along with *Listeria monocytogenes*. A large variety of food, especially dairy products and ready to eat foods can support the growth of *L. monocytogenes* bacteria. Listeriosis outbreak has been associated with consumption of milk, cheese, vegetable salads, and meat products. Therefore, this study was conducted to determine the presence of *L. monocytogenes* in raw milk and dairy products available in Pannala veterinary division. A total number of 66 samples, comprising 30 raw milk samples collected from 10 milk collecting centers, 36 dairy products; namely ice cream (n=12), flavored milk (n=12) and Ultra-High Temperature processed (UHT) milk (n=12) were used in this study. Samples were microbiologically analyzed by following the methods recommended by ISO 11290-1:2017 to isolate *Listeria* species. Buffered *Listeria* enrichment broth was used for selective enrichment and then enriched culture was inoculated to the standard selective differential HiChrome™ *Listeria* agar medium to identify and isolate the *L. monocytogenes* based on phenotypic characteristics. Isolates were further analyzed using Gram's staining and hemolysis test for the confirmation of *L. monocytogenes*. The result of this study revealed that overall, 41 % (27/66) of total studied samples were contaminated by *L. monocytogenes* including 37 % of raw milk, 58 % of ice cream and 33 % of flavored milk samples and no *L. monocytogenes* was detected in UHT milk. In conclusion, prevalence of *L. monocytogenes* in raw milk and dairy products has a potential public health risk, due to prevalence of *L. monocytogenes* in raw milk and dairy products. Further, molecular studies are required to confirm the presence of *L. monocytogenes* in biochemically identified isolates.

Keywords: Dairy products, *Listeria monocytogenes*, Raw milk