

ABSTRACT

MUHAMMAD ARKENT SHANGKARA. *Rapid Detection of Foodborne Pathogen Listeria monocytogenes in Food Samples by Real-Time Polymerase Chain Reaction Method. Under guidance of Prof. Dr. MUKTININGSIH NURJAYADI, M.Si; VIRA SAAMIA S.Si, M.Biomed.*

Food poisoning cases often occur due to the food contamination caused by pathogenic bacteria. One of them is Listeria monocytogenes bacteria that found in dairy and beef. The newest case been reported from March to June 2020 caused by imported enoki mushroom that have been contaminated with Listeria monocytogenes. Under the research of Salmonella UNJ team was to detect Listeria monocytogenes quickly in dairy, beef and enoki mushroom using primer. Hly primer is designed with 158 amplicon length and annealing temperature is 60°C. Primer hly could specifically detect sample of milk, beef and enoki mushroom with typical Ct \pm 12 and Tm values at \pm 80°C. Result of specificity test show that primer can recognize Listeria monocytogenes with different fluorescent signal, that can be differentiated to non target bacteria. Sensitivity test show that primer has ability to detect the smallest concentration up to 0,0208 ng/ μ L with Ct 23,96. Limit of Detection primer is 0,02 CFU/mL. Based on reasearch result, primer hly is potentially to be a detection kit for Listeria monocytogenes in food samples.

Keyword: Primer hly, Real-Time PCR, Listeria monocytogenes, Enoki mushroom