ABSTRACT

Microbiological Quality of Household Drinking Water Based on Escherichia coli Contamination in Kampung Long Keluh

Fitri Showiyah, Ratih Wirapuspita Wisnuwardani

Correspondence E-mail : fshowiyah@gmail.com

The microbiological quality of drinking water can be affected by conditions at the water source as well as handling, processing, storage, and serving practices. Escherichia coli (E. coli) is used as an indicator of the microbiological safety of drinking water. In Long Keluh Village, households rely on water sources for daily needs, but information on the microbiological quality of drinking water is limited. Therefore, assessing E. coli contamination is crucial.

Objective : This study aimed to assess the microbiological quality of household drinking water based on the presence of Escherichia coli in Kampung Long Keluh.

Research Methods/ Implementation Methods : The method used in this study was a cohort design; the assessment was conducted in 2024 in Long Keluh Village. The sample consisted of 15 households and 30 water samples, analyzed using an *E. coli* test kit. The water samples comprised raw water and drinking water sourced from mountain springs.

Results : Based on the results of laboratory examinations of the 30 samples, 11 samples (36.67%) met E. coli quality standards, while 19 samples (63.33%) did not meet quality standards. The percentage of samples that did not meet quality standards was 26.66 percentage points higher than the samples that did. This indicates that the microbiological quality of the water in most samples did not meet

Conclusion/Lesson Learned : Of the 30 samples examined, the majority (63.33%) did not meet E. coli quality standards. Therefore, an evaluation of the water source, treatment process, storage, and distribution is necessary to prevent contamination.

Keyword : drinking water; Escherichia coli; microbiological quality; household water; fecal contamination

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