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ABSTRACT

Title of Abstract : EVALUATION OF SHIP SANITATION AND ITS IMPLICATIONS
FOR THE MICROBIOLOGICAL QUALITY OF CLEAN WATER
ON FOREIGN VESSELS

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Ships serve as major sea transportation modes and have the potential to act as a medium for disease transmission. Proper ship sanitation is therefore essential to prevent the spread of diseases onboard, particularly those transmitted through clean water. Global data on ship sanitation in Indonesia remains limited, as does research investigating the relationship between sanitation and microbiological quality

This study aims to evaluate sanitation levels on foreign vessels and analyze their implications for the microbiological quality of clean water within the working area of the Class I Port Health Office (Balai Kekarantinaan Kesehatan) in Samarinda. The findings are expected to support quarantine policy improvement and supervision.

This quantitative analytical study used a cross-sectional design and was conducted from September to October 2025. The sample consisted of 20 foreign vessels docking at PT Kaltim Prima Coal Port, Sangatta, that met the inclusion criteria. Data were analyzed using univariate analysis and Fisher's Exact Test.

The findings showed that 20% (4 vessels) did not meet sanitation standards, and 10% (2 vessels) did not meet microbiological water quality requirements. A significant association was found between sanitation quality and the microbiological quality of onboard water supplies ($P = 0.032$).

Ship sanitation conditions significantly affect the microbiological quality of clean water on foreign vessels. Routine monitoring and improved compliance with international sanitation standards are necessary to reduce the risk of cross-border disease transmission.

Keyword : Ship sanitation, microbiological quality, clean water