DESCRIPTION IN BACTERIAL COLONY COUNTS IN ANTACID SUSPENSION PREPARATIONS BASED ON STORAGE TEMPERATURE

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ABSTRACT

Antacids are medications commonly used to treat gastritis or acid-related gastrointestinal disorders. Antacid suspensions are classified as multiple-dose preparations, which require storage for a certain period between uses. Storage temperature is a critical factor influencing the physical stability of such preparations, as it can significantly affect microbial growth. In Indonesia, ambient temperatures vary depending on geographic location and altitude, with lowland regions generally experiencing higher temperatures (26–32°C) and mountainous areas being cooler (15–25°C). These temperature variations may potentially impact microbial proliferation in previously opened preparations This study utilized the highest and lowest ambient temperatures recorded in East Java in 2024—specifically, 16.2°C as the lowest and 37.4°C as the highest. It employed a descriptive research design aimed at illustrating the relationship between storage temperature and the number of microbial colonies in antacid suspension preparations. The findings indicated that bacterial colony counts were higher in samples stored at 16,2°C compared to those stored at 37,4°C. Therefore, it can be concluded that microbial growth was more prominent at 16,2°C than at 37,4°C.

Keywords*: Antacid Suspension, Colony Count, Microorganisms, Storage Temperature.*