

THE COMPARISON OF PURITY AND CONCENTRATION OF HEPATITIS B VIRUS DNA WITH THREE DIFFERENT EXTRACTION METHODS

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ABSTRACT

Hepatitis is an inflammation of the liver caused by the hepatitis virus and which is the most common cause of liver inflammation in the world. Indonesia is a country with high endemicity of Hepatitis B, to quickly diagnose hepatitis B can use molecular techniques. Extraction (isolation) of DNA is an important step in molecular techniques that aim to obtain DNA extracts with high concentration and purity. Boiling method, QIAamp DNA Blood Mini Kit, and Wizard Genomic DNA Purification Kit can extract DNA from Hepatitis B virus. The purpose of this research is to find out the best method for Hepatitis B virus extraction based on concentration and purity of the three extraction methods based on the results of literature studies. This study uses a Systematic Literature Review research design by collecting scientific research related to the topic used. seven research studies were obtained which have the same research theme and can represent the research objectives which were then analyzed by using descriptive analysis methods. Based on the results of this literature study, a good extraction method for extracting the Hepatitis B virus is the commercial kit extraction method from Promega, this method is considered superior because it has several advantages, such as the concentration value in the number of copies obtained is very high at 6.15×10^8 copies / mL, and the purity value that has been evaluated according to the absorbance ratio of 260/280 (1.8-2.0).

Keywords: Hepatitis B, DNA extraction, boiling technique, QIAamp DNA Mini Kit, and Wizard Genomic DNA Purification Kit