

ABSTRACT

Lucia Francis, 24020120130105. **Microanatomic Comparison of White Rat Spleen (*Rattus norvegicus*) with Fixation Using 10% BNF, Bouin, and 50% Ethanol for One Week.** Under the guidance of Muhammad Anwar Djaelani and Rasyidah Fauzia Ahmar.

Fixation is considered as a crucial step in the process of making histological section in histopathology research. Fixation is important to preserve tissue, ensuring the tissue has the most similar condition to the living tissue. Fixative solutions commonly used for the fixation process include 10% BNF, Bouin, and 50% ethanol. The organ used for this study is white rat's spleen, one of the lymphoid organs that plays a role in body immunity. There has been very little research discussing the effect of duration of fixation on the spleen using 10% BNF, Bouin, and 50% ethanol fixatives up until now. The purpose of this study was to analyze the visible damage seen in histological section of white rat spleen (*Rattus norvegicus*) fixed with 10% BNF, Bouin, and 50% ethanol for one week. The spleen was isolated from the body of white rat and cleaned before being fixed using 10% BNF, Bouin, and 50% ethanol for one week. Washing was carried out on the tissues fixed with 10% BNF and Bouin after which the slides were made. The result showed that 10% BNF combined with washing produced the best appearance of the histological slides when viewed from qualitative parameters, Bouin resulted in the smallest shrinkage of cell and cell nuclei sizes compared to other types of fixatives, and 50% ethanol produced the worst appearance of the slides. The conclusion of this study is that 10% BNF combined with washing have the best result of the histological section, while 50% ethanol produced the worst histological section.

Keyword: *Fixation, 10% BNF, Bouin, 50% ethanol, Spleen microanatomy*