ABSTRACT

This bachelor's thesis explores in detail the issue of DNA visualization and its use in the teaching of biology in high schools. It is based on the description of technological methods for DNA visualization, including gel electrophoresis, polymerase chain reaction (PCR), DNA sequencing, fluorescence microscopy and molecular hybridisation. Emphasis is placed on the study of the structure and properties of DNA, including the process of DNA replication, which is essential for the understanding of the function of DNA. It also compares the different types of visualization dyes available for staining DNA, providing a comprehensive overview of their properties and potential. Emphasis is placed on the potential applications of these methods and dyes in the context of high school biology education. Overall, the thesis attempts to provide a comprehensive view of DNA visualization and its use in high school education.