ABSTRACT

The BCR-ABL1 mutation detection test is an important test for the diagnosis of Chronic Myeloid Leukemia. Asian countries, such as Indonesia, have a higher occurrence of this disease, and improving these tests was important for the diagnosis and monitoring of Chronic Myeloid Leukemia. This project aimed to improve the detection of the T315I mutation in breakpoint region-Abelson (BCR-ABL1) by implementing a nested PCR procedure into the mutation test and trying to find the optimum annealing temperature for the primers used. The project was successful as the trial of implementing nested PCR to the mutation test was able to produce visible bands during the gel electrophoresis visualization, and it could replicate Sanger Sequencing results using old samples. The success of being able to detect the T315i mutation variant also does not hinder the procedure's ability to detect other types of mutation. This project was able to show that a simple procedural adjustment could be prioritized in solving a problem.

Keywords: CML, TKI, PCR, BCR, ABL1, M-br, m-bcr, µ-bcr, ATP