

**DIAGNOSTIK KUMAN MYCOBACTERIUM TUBERCULOSIS DENGAN
TEKNIK ZHIEL NEELSEN & PCR (POLYMERASE CHAIN REACTION)
SERTA RESISTENSINYA DENGAN TEKNIK GENEXPERT MTB/RIF
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ABSTRACT

Diagnostic of Mycobacterium tuberculosis with Technique of Zhiel Neelsen & PCR (Polymerase Chain Reaction) and Resistance by MTB / RIF Genexpert Technique, 2017.

Tuberculosis (TB) is the most common cause of death in developing countries of which 75% of patients are in the productive age of 20-49 years, because in developing countries have dense population and high prevalence, so more than 65% cases of tuberculosis occur in Asia. Terjangung increase in this case is caused by the immune system, nutritional status and personal hygiene of individuals and density of residential neighborhood. WHO recommends treatment for Pulmonary TB patients with DOTS strategy (Directly Observed Treatment Shortcourse Chemotherapy) -or direct supervision of short-term and daily medication-only 36% with an 87% cure rate. Due to the irregular treatment and inadequate combination of drugs in the past there may be immunity of TB germs against widespread or multi drug drug resistance (MDR). This study aims to determine the resistance and sensitivity of Mycobacterium tuberculosis to Anti Tuberculosis drug in tuberculosis patients with PCR and GeneXpert technique. The research used laboratory experimental method which was conducted in laboratory of Microbiology Faculty of Medicine and Health Sciences of Syarif Hidayatullah State Islamic University Jakarta in May 2017. The method used was identification of bacteria with Zhiel Neelsen staining, Homogenase and Decontaminase, Biochemical Test of Mycobacterium tuberculosis, PCR, and GeneXpertMTB / RIF. Sputum sampling is done in the morning - while (SPS). The result of BTA staining from Bojonggede Puskesmas was 84 samples, BTA positive was 35 samples and the percentage of BTA positive was 42%, while BTA negative was 49 and the percentage was 58%. PCR test results from 20 samples was 14 positive samples that mean people with tuberculosis infection 70%, while the negative is 6 samples means people who do not suffer from tuberculosis by 30%. The conclusion of this research is PCR test result compared with result of BTA test with Zhiel Neelsen, that is the result of positive test of the percentage is bigger than smear staining test result.

Keywords: Mycobacterium tuberculosis, mutation, multi drug resistance (MDR), decontamination.