**QUANTIFICATION FOR LABORATORY COSTS**

**(XPERT CARTRIDGES, DIAGNOSTIC REAGENTS, AND SUPPLIES)**

Based on the epidemiological situation of tuberculosis in the Kyrgyz Republic, all laboratory calculations were carried out according to ongoing diagnostic measures.

The following types of studies are carried out in the country, which were reflected in the application for laboratory reagents and consumables:

* Direct sputum smear microscopy with Ziehl-Nielsen staining and fluorochromes;
* Inoculation on fluid and solid medium
* Inoculation of the obtained MTB isolates on fluid and solid medium with antibiotics for susceptibility testing to TB drugs
* Xpert-MTB/RIF – molecular genetic method for the diagnosis of tuberculosis and susceptibility testing to R
* GenoTypeMTBDR*plus* (Hine test to FLD) – molecular genetic method for the diagnosis of tuberculosis and susceptibility testing to H и R.
* GenoTypeMTBDR*sl* (Hine test to SLD) – molecular genetic method for the diagnosis of tuberculosis and susceptibility testing to SLD.

Each study is recorded in the laboratory registry. The calculation was carried out according to the number of studies performed per year (microscopy logs, Xpert-MTB / RIF logbook, culture and molecular diagnostic tests logs, DST logs (drug susceptibility tests) - reporting data on laboratory tests (TB form 06 - tables: Table 3. Results of testing drug susceptibility to first- and second-line drugs; Table 5. Report on bacterioscopy at the rayon level; Table 6. Report on detection of TB by Xpert-MTB / RIF method at the rayon level.) According to the baseline data for 2018:

* MBT microscopic examination - 18,403 individuals with suspected TB;
* Xpert-MTB / RIF studies - 17,237 individuals.

Calculations for consumables are performed according to the calculations in the guidelines for laboratory diagnosis of TB recommended by WHO.

On a monthly basis, reports on the consumption of reagents and supplies are provided to the Global Fund / UNDP. An actual inventory is being carried out by representatives of the Global Fund / UNDP.

Monitoring the quality and quantity of all laboratory tests for the diagnosis of tuberculosis in the country on a regular basis is carried out under the direct supervision of the Supranational laboratory in Gauting, Germany.

1. Commercial products for preserving clinical specimens for the diagnosis of tuberculosis, 2017. WHO

<https://www.who.int/tb/publications/2017/commercialproducts_preservation/en/>

1. Algorithm for laboratory diagnosis and treatment-monitoring of pulmonary tuberculosis and drug-resistant tuberculosis using state-of-the-art rapid molecular diagnostic technologies (RU), WHO, 2017

<http://www.euro.who.int/ru/health-topics/communicable-diseases/tuberculosis/publications/2017/algorithm-for-laboratory-diagnosis-and-treatment-monitoring-of-pulmonary-tuberculosis-and-drug-resistant-tuberculosis-using-state-of-the-art-rapid-molecular-diagnostic-technologies-2017>

1. Tuberculosis laboratory biosafety manual (RU), WHO, 2013.

<https://www.who.int/tb/publications/2012/tb_biosafety/ru/>