



# Planning and Budgeting Tool for TB and drug resistant TB testing

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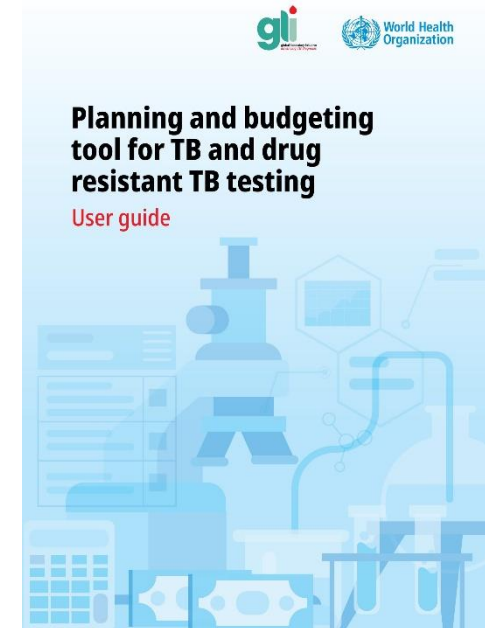
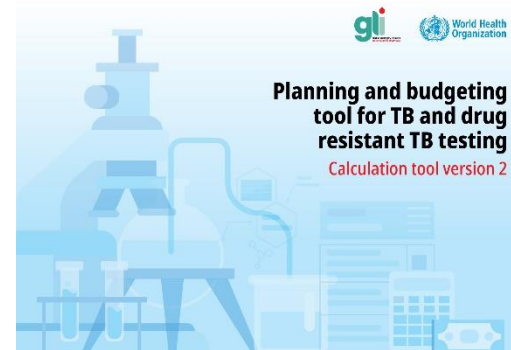


# Planning and Budgeting Tool for TB and drug resistant TB testing

- Calculation of quantities and costs of lab products
- Excel spreadsheets
- User guide
- Calculates from past consumption or morbidity-based forecasting
- Prices and descriptions from the 2021 GDF Diagnostics Catalogue
- **Users should fill out only the values in red on all sheets.**



<https://www.stoptb.org/gli-guidance-and-tools/planning-and-budgeting-tool-tb-and-drug-resistant-tb-testing>



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# Content of User guide



## Background

1. Information and introduction
2. Epidemiology
3. Lipoarabinomannan (LAN) assay
4. Truenat
5. Loop-mediated isothermal amplification for detection of Mycobacterium tuberculosis (TB-LAMP)
6. Xpert MTB/RIF Ultra
7. Ziehl-Neelsen stained and fluorescent light-emitting diode (ZN-LED) microscopy
8. Xpert MTB XDR
9. Line probe assay (LPA) 1st line
10. Line probe assay (LPA) 2nd line
11. MAX™ multi-drug-resistant (MDR)-TB
12. FluoroType MTBDR Ver 2.0
13. Cobas MTB and MTB-RIF-INH and Abbott RT MTB and MTB RIF-INH
14. Processing and solid/liquid culture
15. Rapid MTB identification
16. LJ 1st- and 2nd-line drug-resistance testing
17. Mycobacteria growth indicator tube 1st-line drug-resistance testing
18. Mycobacteria growth indicator tube 2nd-line drug-resistance testing
19. Biosafety and cleaning
20. Maintenance and repair
21. Budget summary



# The tool overview



## Intro and instruction

## Epidemiology

## 19 test specific sheets

- Biosafety and cleaning
- Maintenance and repair

**Tool for calculating budget for consumables for TB diagnostics, version 2.0**

This tool has been designed to facilitate systematic calculation of the quantities and costs of products for countries planning to order diagnostic products and laboratory supplies from the GDF catalogue.

**To use the tool, please follow the steps below**

**Step 1: Select the tests or consumables for which you want a forecast.**

LAM	Yes	<Choose here
Truenat	Yes	<Choose here
TB-LAMP	Yes	<Choose here
Xpert MTB/RIF Ultra	Yes	<Choose here
Ziehl-Neelsen microscopy	Yes	<Choose here
Light-emitting diode microscopy	Yes	<Choose here
Xpert MTB/XDR	Yes	<Choose here
LPA 1st line	Yes	<Choose here
LPA 2nd line	Yes	<Choose here
MAX MDR-TB assay	Yes	<Choose here
FluoroType MTBDR VER 2.0	Yes	<Choose here
Cobas® MTB and MTB-RIF-INH	Yes	<Choose here
Abbott RT MTB and MTB RIF-INH	Yes	<Choose here
Processing and solid and liquid cultures	Yes	<Choose here
Mycobacteria Identification	Yes	<Choose here
Lowenstein-Jensen 1st-line DST	Yes	<Choose here
Lowenstein-Jensen 2nd-line DST	Yes	<Choose here
MGIT 1st-line DST	Yes	<Choose here
MGIT 2nd-line DST	Yes	<Choose here
Biosafety and cleaning	Yes	<Choose here
Maintenance and repair	Yes	<Choose here

**Step 2: Enter the year of interest** 2023

**Step 3: Define the forecasting period (months)** 12

**Step 4: Compile the epidemiological information** **Epidemiology**

**Step 5: Use the consumption or the morbidity-based forecasting method for each selected diagnostic test.**

**Epidemiology: for calculation of morbidity-based forecasts**

Values in red should be entered or adjusted according to actual country data and practices, when possible.

TB epidemiology			
Pulmonary, bacteriologically confirmed	New cases:	3 010	Relapse cases: 152
Pulmonary, clinically diagnosed	New cases:	347	Relapse cases: 0
Extrapulmonary	New cases:	202	Relapse cases: 0
Total no. of new cases notified		3 559	Total relapse cases notified: 152
Previously treated cases, including relapses			
Total no. of cases notified		3 764	
TB cases in children (%)		3%	Adult TB cases (%): 0%
TB cases in HIV-positive people (%)		14%	HIV-negative or HIV-unknown cases (%): 0%
Number of HIV-positive people in care		477	
Number of new HIV-positive notifications (annual)		495	
Anticipated number of RR/MDR-TB cases to be detected during the year		20	

General assumptions			
Percentage of relapse or previously treated with mono INH-R	4%		
Ratio of people with signs and symptoms of TB who have a history of previous successful treatment: notified relapse cases	0	Ratio of contacts per notified RR-TB case	3
Ratio of people with signs and symptoms of TB: 1 bacteriologically confirmed (or smear-positive) notified case	0		

HIV assumptions			
Average number of times that clinical screening for TB is performed per person living with HIV (PLHIV) per year	1	% of PLHIV found to have signs and symptoms of TB when screened	7%
		% of seriously ill PLHIV population or with CD4 < 200 found to have signs and symptoms of TB when screened	60%

Child assumptions			
Ratio of children with signs and symptoms of TB: children notified with TB	5		

**Step 4: Navigate to the sheets below, and use consumption-based or morbidity-based forecasting for each selected diagnostic test.**

**LAM**  
Two methods are proposed for calculating the expected number of tests to be performed during the period.

Values in red should be entered or adjusted according to actual country data and practices, when possible.

**Truenat**  
Two methods are proposed for calculating the expected number of tests to be performed during the period.

Values in red should be entered or adjusted according to actual country data and practices, when possible.

**TB-LAMP**  
Two methods are proposed for calculating the expected number of tests to be performed during the period.

Values in red should be entered or adjusted according to actual country data and practices, when possible.

**Xpert MTB/RIF**  
Two methods are proposed for calculating the expected number of tests to be performed during the period.

Values in red should be entered or adjusted according to actual country data and practices, when possible.

No. of tests performed last year	33010
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Method 1: Consumption-based forecasting		Method 2: Morbidity-based forecasting	
The expected number of tests is based on the average daily use per instrument module.		The estimated number of tests calculated is based on epidemiological data (notifications and allowed algorithms). The calculated sum is the target to be reached when algorithms are implemented according to the indicated coverage and assumptions. The default coverage below is for an Xpert for all algorithms (100% coverage for all patient groups).	
Number of instrument modules in the country	30	Patient population	Number of Xpert MTB/RIF tests required for the period
Number of working days per year	220	People living with HIV (PLHIV) with signs and symptoms of TB	0%
Average number of Xpert MTB/RIF tests performed per module per day	3	Children with signs and symptoms of TB	0%
Number of Xpert MTB/RIF Ultra tests required for the period	19 800	People at risk of drug resistant TB	0%
		Previously untreated HIV-negative adults with signs and symptoms of TB	0%
		New smear-positive TB cases requiring Xpert for rifampicin testing purposes (including those remaining as the initial diagnostic test)	0%
		Total number of Xpert MTB/RIF Ultra cartridges required for the period	100

Quantities of Xpert MTB/RIF Ultra products to be ordered	
Number of Xpert MTB/RIF cartridges required for the period (with forecasting method 1 or 2 or a value in between)	35 000
Percentage of invalid, error, no result	2%
Carriage stock	2000
Total number of Xpert MTB/RIF cartridges required for the period	35 700
Total number of Xpert MTB/RIF cartridges to be ordered	33 700

GDF code	Item	Units / pack	No. of packs to be ordered	Unit cost (US\$)	Calculation details
106431	Xpert MTB/RIF cartridges	50	674	499.00	
106360	Sterile plastic centrifuge tubes 50 mL	500	0	45.00	If you use normal system containers, set '0' for no. of packs to be ordered
106215	Sputum containers, pack of 1000	1000	38	83.30	
<b>Summary</b>		<b>Cost (US\$)</b>			
		<b>Total cost of Xpert MTB RIF Ultra products</b>		<b>337 651.00</b>	

**Cleaning and biosafety**

Equipment	No. of units	Unit cost (US\$)	Service costs for 1 year (NPR)	Comments/Details
<b>Biosafety cabinets</b>	1	0	0.00	
Service contract for 1 year	0	0	0.00	
Spare parts	0	0	0.00	
Travel and accommodation for technicians	0	0	0.00	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
<b>Tuberculosis (LPA)</b>	3	0	0.00	
Service contract for 1 year	0	0	0.00	
Spare parts	0	0	0.00	
Travel and accommodation for technicians	0	0	0.00	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
<b>Thermocycler</b>	3	0	0.00	
Service contract for 1 year	0	0	0.00	
Spare parts	0	0	0.00	
Travel and accommodation for technicians	0	0	0.00	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
<b>Laminar flow (PCR workstation)</b>	0	0	0.00	
Service contract for 1 year	0	0	0.00	
Spare parts	0	0	0.00	
Travel and accommodation for technicians	0	0	0.00	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
<b>Autoclave</b>	0	0	0.00	
Service contract for 1 year	0	0	0.00	
Spare parts	0	0	0.00	
Travel and accommodation for technicians	0	0	0.00	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
<b>BO BACTEC™ MGIT™ 960 System</b>	0	0	0.00	
Service contract for 1 year	0	0	0.00	1 visit per calendar year, 2 emergency calls
Travel and accommodation for technicians	0	0	0.00	
BO BACTEC™ air filter, rectangular, 2 pack	0	0	0.00	For emergency visits only (1/year)
BO BACTEC™ container for 1.5 liter	0	0	0.00	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
<b>BO MAX MDR-TB</b>	3	0	0.00	
Service contract for 1 year	0	0	0.00	
Spare parts	0	0	0.00	
Travel and accommodation for technicians	0	0	0.00	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
<b>FluoroType MTBDR VER 2.0</b>	0	0	0.00	
Service contract for 1 year	0	0	0.00	
Spare parts	0	0	0.00	
Travel and accommodation for technicians	0	0	0.00	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
<b>Cobas® MTB and MTB-RIF-INH</b>	0	0	0.00	
Service contract for 1 year	0	0	0.00	
Spare parts	0	0	0.00	
Travel and accommodation for technicians	0	0	0.00	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	
<b>Abbott RT MTB and MTB RIF-INH</b>	0	0	0.00	
Service contract for 1 year	0	0	0.00	
Spare parts	0	0	0.00	
Travel and accommodation for technicians	0	0	0.00	
<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	

GDF code: GeneXpert 4-module 0 Unit cost (US\$): 0





# The tool overview

## Annual budget overview

Reagents and consumables	Cost (US\$)
ZN microscopy if consumables are procured in kit	4 288,00
ZN microscopy if consumables are procured separately	0,00
LED microscopy if consumables are procured in kit	0,00
LED microscopy if consumables are procured separately	0,00
TB-LAMP	0
Truenat	0,00
Xpert MTB/RIF Ultra	339 491,40
LAM	20 476
LPA 1st line	3 472,90
LPA 2nd line	11 381,35
MAX MDR-TB assay	3 472,90
FluoroType MTBDR Ver 2.0	3 472,90
Cobas® MTB and MTB-RIF-INH	3 472,90
Abbott RT MTB and MTB RIF-INH	3 472,90
Sample processing	368,00
Solid culture	80,10
Liquid culture	0,00
Culture identification	5 678,05
FL DST on LJ	0,00
SL DST on LJ	0,00
FL DST on MGIT	786,60
PZA DST on MGIT	0,00
Liquid 2nd-line DST on MGIT when using ready-made lyophilized reagents	0,00
Liquid 2nd-line DST on MGIT when using pure drug powder reagents	0,00
<b>Sub-total</b>	<b>399 913,80</b>

Cleaning and biosafety	Cost (US\$)
Biosafety	9 617,30
Cleaning	2 608,95
<b>Sub-total</b>	<b>12 226,25</b>

Total no. of tests	Cost per test
18 000	0,24
18 000	0,00
0	0,00
0	0,00
0	0,00
35 700	9,51
6 000	3,41
0	0,00
684	16,64
0	0,00
0	0,00
0	0,00
0	0,00
0	0,00
257	1,43
257	0,31
225	0,00
3 100	1,83
367	0,00
0	0,00
0	0,00
0	0,00
0	0,00
0	0,00

## Overview of laboratory items

GDF code	Reagents & consumables	Qty
<b>ZN microscopy</b>		
106522	ZN Kit	16
106601	Basic fuchsine, 100 g (bottle)	0
106602	Methylene blue, 10 x 10 g (bottles)	0
106599	Phenol crystals, colourless, 500 g	0
106597	Ethanol, 99%, 1 L (bottle), for stain solutions	0
106597	Ethanol, 99%, 1 L (bottle), for decolourization	0
106603	Hydrochloric acid, 1 L (bottle)	0
106655	Wooden applicator sticks, 150 mm	0
106609	Microscope slides, lime-soda-glass, pack of 1000	0
106627	Immersion oil, 100 mL	0
106656	Lens-cleaning tissue	0
106354	Round filter paper, 150 mm	0
106597	Ethanol, 99%, 1 L (bottle), for spirit lamps	0
106355	Marker pen (water-resistant)	0
106525	Sputum containers, pack of 1000	0
<b>LED microscopy if consumables are procured in kit</b>		
106523	LED kit	0
106602	Methylene blue, 10 x 10 g (bottles)	0
106599	Phenol crystals colourless, 500 g	0
106276	Auramine O, powder, 25 g	0
106597	Ethanol, 99%, 1 L (bottle), for decolourization	0
106603	Hydrochloric acid, 1 L (bottle)	0
106655	Wooden applicator sticks, 150 mm	0

# Intro and instructions

1. Select Yes or No to select what tests are performed in your lab.
2. Enter the year for your calculation
3. Enter the forecasting period
4. Click Epidemiology to proceed to next sheet

## Tool for calculating budget for consumables for TB dia

This tool has been designed to facilitate systematic calculation of the quantities and planning to order diagnostic products and laboratory supplies from the

**To use the tool, please follow the steps below**

Step 1: Select the tests or consumables for which you want a forecast.		
LAM	Yes	<=Choose here
Truenat	No	<=Choose here
TB-LAMP	No	<=Choose here
Xpert MTB/RIF Ultra	Yes	<=Choose here
Ziehl-Neelsen microscopy	Yes	<=Choose here
Light-emitting diode microscopy	No	<=Choose here
Xpert MTB/XDR	No	<=Choose here
LPA 1st line	Yes	<=Choose here
LPA 2nd line	No	<=Choose here
MAX MDR-TB assay	No	<=Choose here
FluoroType MTBDR VER 2.0	No	<=Choose here
Cobas® MTB and MTB-RIF-INH	No	<=Choose here
Abbott RT MTB and MTB RIF-INH	No	<=Choose here
Processing and solid and liquid cultures	Yes	<=Choose here
Mycobacteria Identification	Yes	<=Choose here
Lowenstein-Jensen 1st-line DST	No	<=Choose here
Lowenstein-Jensen 2nd-line DST	Yes	<=Choose here
MGIT 1st-line DST	Yes	<=Choose here
MGIT 2nd-line DST	Yes	<=Choose here
Biosafety and cleaning	Yes	<=Choose here
Maintenance and repair	Yes	Choose here

Step 2 : Enter the year of interest	2023
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Step 3 : Define the forecasting period (months)	12
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Step 4 : Compile the epidemiological information	Epidemiology
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Step 5 : Use the consumption or the morbidity-based forecasting method for each selected diagnostic test.



# Epidemiology

1. Fill in values in red
2. Data automatically link to test sheets for morbidity-based forecasting method

## Epidemiology:

for calculation of morbidity-based forecasts

Values in red should be entered or adjusted according to actual country data and practices, when possible.

<b>TB epidemiology</b>			
Pulmonary, bacteriologically confirmed	New cases:	30 000	Relapse cases: 300
Pulmonary, clinically diagnosed	New cases:	2 000	Relapse cases: 50
Extrapulmonary	New cases:	500	Relapse cases: 20
<i>Total no. of new cases notified</i>		32 500	<i>Total relapse cases notified:</i> 370
Previously treated cases, excluding relapses		100	
<i>Total no. of cases notified</i>		32 970	
TB cases in children (%)		5%	Adult TB cases (%): 97%
TB cases in HIV-positive people (%)		15%	HIV-negative or HIV-unknown cases (%): 80%
Number of HIV-positive people in care		5 000	
Number of new HIV-positive notifications (annual)		500	
Anticipated number of RR/MDR-TB cases to be detected during the year		20	
<b>General assumptions</b>			
Percentage of relapse or previously treated with mono INH- R		4%	
Ratio of people with signs and symptoms of TB who have a history of previous successful treatment: notified relapse cases		5	Ratio of contacts per notified RR-TB case: 3
Ratio of people with signs and symptoms of TB: 1 bacteriologically confirmed (or smear-positive) notified case		9	
<b>HIV assumptions</b>			
Average number of times that clinical screening for TB is performed per person living with HIV (PLHIV) per year		2	% of PLHIV found to have signs and symptoms of TB when screened: 56%
			% of seriously ill PLHIV population or with CD4 < 200 found to have signs and symptoms of TB when screened: 60%
<b>Child assumptions</b>			
Ratio of children with signs and symptoms of TB: children notified with TB		14	

# Lipoarabinomannan (LAM) assay Method1



## Method 1: Consumption-based forecasting

The expected number of tests is based on the number of tests used on average per month.

Average number of LAM tests performed per month	500
Number of LAM tests performed during the period	6 000





# Lipoarabinomannan (LAM) assay

## Method 2

### Method 2: Morbidity-based forecasting

The estimated number of tests calculated is based on epidemiological data (notifications) and planned algorithms. The calculated sum is the target to be reached when algorithms are used according to the indicated coverage and assumptions.

Patient population	Coverage of testing	Number of LAM tests for the period
People living with HIV (PLHIV) with signs and symptoms of TB	70%	3 920
PLHIV seriously ill or with CD4 < 200	5%	300
Total number of LAM for the period		4 520

# Lipoarabinomannan (LAM) assay Quantities



## Quantities of LAM products to order

Total number of LAM performed during the period (with forecasting method 1 or 2 or a value in between)	4 520
Current stock	50
Total number of LAM required during the period	4 520
Total number of LAM to be ordered <input type="text"/>	4 470

GDF code	ITEMS	Unit / pack	Need per test	No. of packs to be ordered	Unit cost (US\$)	Calculation details
106749	Determine TB LAM Ag tests	25	1	179	\$ 92,50	
106525	Sputum containers	1000	1	5	\$ 83,30	For collecting urine
106388	Sterile pipette filter tips, 5–100 µL	960	1	5	\$ 61,00	For delivering 60 µL and suitable for 1-channel pipette, varies from 20 to 200 µL

Summary	Cost (US\$)
Total cost of LAM products	\$ 17 279,00
Cost per sample tested	\$ 3,87

# Xpert MTB/RIF Ultra Method for forecasting



No. of tests performed last year

0

## Method 1: Consumption-based forecasting

The expected number of tests is based on the average daily use per instrument module.

Number of instrument modules in the country

100

Number of working days per year

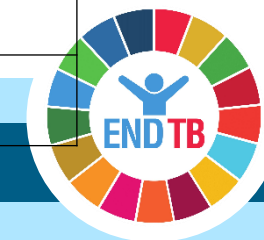
250

Average number of Xpert MTB/RIF tests performed per module per day

3

Number of Xpert MTB/RIF Ultra tests required for the period

75 000



# Xpert MTB/RIF Ultra Quantities



## Quantities of Xpert MTB/RIF Ultra products to be ordered

Number of Xpert MTB/RIF cartridges required for the period (with forecasting method 1 or 2 or a value in between)	35 000
Percentage of invalid, error, no result	2%
Current stock	2000
Total number of Xpert MTB/RIF cartridges required for the period	35 700
Total number of Xpert MTB/RIF cartridges to be ordered	33 700

GDF code	Item	Units / pack	No. of packs to be ordered	Unit cost (US\$)	Calculation details
CGXMTB-RIF-50	Xpert MTB/RIF cartridges	50	674	\$ 499,00	
106340	Sterile plastic centrifuge tubes 50 mL	500	0	\$ 45,00	If you use normal sputum containers, set "0" for <b>No. of packs to be ordered</b>
106525	Sputum containers, pack of 1000	1000	38	\$ 83,30	

Summary	Cost (US\$)
Total cost of Xpert MTB Rif Ultra products	\$ 339 491,40

## LPA 1st line

Two methods are proposed for calculating the expected number of tests to be performed during the period.

Values in **red** should be entered or adjusted according to actual country data and practices, when possible.

<b>Method 1: Consumption-based forecasting</b> The expected number of tests is based on number of tests performed last year	
Average number of LPA 1st-line tests performed per month	<b>50</b>
Number of LPA 1st-line tests required for the period	<b>600</b>

<b>Method 2: Morbidity-based forecasting</b> The estimated number of tests calculated is based on epidemiological data (notifications) and planned algorithms. The calculated sum is the target to be reached when algorithms are implemented according to the indicated coverage and assumptions.		
Patient population	Coverage of testing	Number of LPA 1st-line tests required for the period
New smear-positive TB cases receiving the test for rifampicin and isoniazid testing purposes (excluding those receiving it as the initial diagnostic test)	<b>0%</b>	<b>0</b>
<b>Total number of LPA 1st-line tests required for the period</b>		<b>0</b>

LPA 1st-line test used	<div style="border: 1px solid black; padding: 2px;"> <span style="color: red;">Geno Type MTBDRplus</span> <span style="float: right; font-size: small; color: red;">&lt;=Choose here</span> </div> <div style="border: 1px solid gray; padding: 2px; margin-top: 2px;"> <span style="background-color: #0056b3; color: white; padding: 2px;">Geno Type MTBDRplus</span> <span style="padding: 2px;">Genoscholar NTM+MDRTB II</span> </div>	
Number of batches used per week	<b>0</b>	Enter the appropriate number based on past consumption. The default number is based on optimal use of the test
Number of specimens per batch	<b>0</b>	Enter the appropriate number based on past consumption. The default number is based on optimal use of the test





Total number of LPA 1st-line test

by initiative  
diagnosis

LPA 1st-line test used

Geno Type MTBDRplus

<=Choose  
here

Geno Type MTBDRplus

Genoscholar NTM+MDR TB II

number of batches used per week

0

Enter the appropriate number based on  
default number is based on op

# MGIT 1<sup>st</sup> line DST



GDF code	Item	Units / pack	No. of packs	Unit cost (US\$)	Calculation details
106028	BACTEC™ MGIT™ 960 SIRE kit, One kit is sufficient for 40 test	40	0	\$ 72,70	
106026	EBL MGIT tubes for use in Bactec MGIT 960 (7 mL) - 100 tubes/pack	100	0	\$ 195,00	5 tubes per test
106389	Sterile filter tips, 20–200 µL	960	0	\$ 61,00	1 tip per test for adding drug + 1 tip per test for diluting GC
106390	Sterile filter tips, 100–1000 µL	960	0	\$ 88,50	1 tip per test for supplementation + 1 tip per test for bacteria
106181	Sterile dispenser tips, 10 mL	100	4	\$ 196,65	1 or 2 tips per working day, depending on workload
<b>Total for DST SIRE</b>				<b>\$ 787</b>	

Number of staff in the laboratory	5
Number of staff in the BSL3	3
Number of biosafety cabinets	1

**Cleaning**

GDF code	Family	Item	No. per pack	Quantity	Price (US\$)	Comment
106376	Consumables	Cotton wool	1	6	8,55	1 roll per 2 months
106444	Consumables	Plastic bags, biohazard waste, 30 L	200	7	98,6	3 per day for changing room + 1 per BSC
106348	Consumables	Transparent polypropylene waste bag, 420 x 600 mm	1000	1	107,05	3 per day
106755	Consumables	Paper towels, 200	1	6	1,45	1 per 2 months
106359	Consumables	Sterile indicator tape, autoclave	1	8	2,15	2 per quarter
106358	Consumables	Sterile indicator tape, hot-air oven	1	8	14,25	2 per quarter
106377	Consumables	Absorbent laboratory paper	50	6	30,8	2 per BSC per day
106363	Consumables	Tube brush	5	0	8,95	For culture, 1 per 500 cultures
106371	Consumables	Disinfectant for BSC surface	1	4	35,2	1 bottle per quarter per BSC
106294	Consumables	Disinfectant for cleaning instrument	1	4	46,55	1 bottle per quarter per BSC
106370	Consumables	Disinfectant for floors	1	4	17	1 per 2 months
106374	Consumables	Disinfectant for hands, 1 L	1	24	8,2	2 per month
106333	Chemicals	Ethanol / isopropanol, 5 L	1	8	32,15	2 bottles per quarter per BSC
106331	Chemicals	Phenol, 1 kg	1	7	63,2	25 g per day
106373	Consumables	Liquid soap	1	37	3,9	3 per month

**Biosafety**

**For staff working in BSL3 laboratory only**

106727	Consumables	Hair cover	1000	1	61,45	1 per day per staff
106726	Consumables	Shoe cover	2000	2	213,25	4 per day per staff
106725	Consumables	Laboratory coat size L - disposable - sterile	60	2	501,25	0.66 per week per staff
106724	Consumables	Laboratory coat size M - disposable - sterile	60	4	501,25	1.32 per week per staff
106723	Consumables	Laboratory coat size S - disposable - sterile	60	1	501,25	0.66 per week per staff
106820	Consumables	Latex gloves size L	100	27	19,65	10 per staff per day
106819	Consumables	Latex gloves size M	100	53	19,65	10 per staff per day
106818	Consumables	Latex gloves size S	100	27	19,65	10 per staff per day
106829	Consumables	Disposable respirators FFP2	20	8	40,1	2 per staff per week
106502	Consumables	Surgical gown - cotton - L	1	52	18,9	1 per BSC per week
106501	Consumables	Surgical gown - cotton - M	1	52	18,9	1 per BSC per week
106500	Consumables	Surgical gown - cotton - S	1	52	18,9	1 per BSC per week
106094	Consumables	First-aid kit for scientific laboratories	1	1	248,85	1 per 3 years

Summary	Cost (US\$)
Cost for cleaning	\$ 2 609
Cost for biosafety	\$ 9 617
<b>Total cost</b>	<b>\$ 12 226</b>

# Maintenance and repair

Exchange rate	1,00 €	\$1,00
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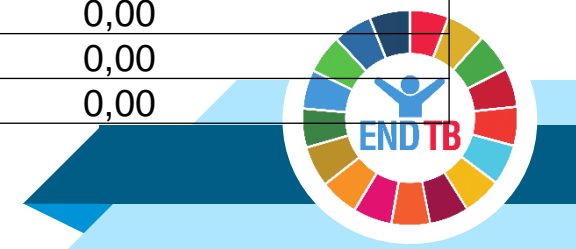
## Costs of equipment service and maintenance contracts

Equipment	No. of units	Unit cost (US\$)	Service costs for 1 year (US\$)
<b>Biosafety cabinets</b>	<b>1</b>		
Service contract for 1 year	0	0	0,00
Spare parts	0	0	0,00
Travel and accommodation for technician	0	0	0,00
<b>Sub-total</b>			<b>0,00</b>

- This sheet provides two separate lists of commonly used lab equipment:
  - equipment with annual service and maintenance contracts
  - equipment without contracts, cost of repair is estimated to be 10% of the equipment price
- Enter number of units of equipment
- Blank cells are provided to enter additional equipment not listed
- €/US\$ converter for items priced in € on the GDF catalogue.



GDF code	Equipment	No. of units	Unit cost (US\$)* GDF catalogue prices	Value of equipment (US\$)	Costs of repair (10% of value)
106629	Reflecting mirror for bright field microscope - ZN	100	12,82	1282	128,2
106533	Microscope - battery supply unit	0	94,11	0,00	0,00
106531	LED microscope (basic configuration)	0	1503,8	0,00	0,00
106532	LED microscope - light mirror	0	24	0,00	0,00
106475	Slide warmer	0	1056,75	0,00	0,00



## Annual budget overview



Reagents and consumables	Cost (US\$)	Total no. of tests	Cost per test
ZN microscopy if consumables are procured in kit	4 288,00	18 000	0,24
ZN microscopy if consumables are procured separately	0,00	18 000	0,00
LED microscopy if consumables are procured in kit	0,00	0	0,00
LED microscopy if consumables are procured separately	0,00	0	0,00
TB-LAMP	0	0	0,00
Truenat	0,00	0	0,00
Xpert MTB/RIF Ultra	750 340,60	76 500	9,81
LAM	17 279	4 520	3,82
LPA 1st line	3 472,90	0	0,00
LPA 2nd line	0,00	684	0,00
MAX MDR-TB assay	0,00	0	0,00
FluoroType MTBDR Ver 2.0	0,00	0	0,00
Cobas® MTB and MTB-RIF-INH	0,00	0	0,00
Abbott RT MTB and MTB RIF-INH	0,00	0	0,00
Sample processing	368,00	268	1,38
Solid culture	80,10	268	0,30
Liquid culture	0,00	225	0,00
Culture identification	5 678,05	3 100	1,83
FL DST on LJ	0,00	367	0,00
SL DST on LJ	0,00	0	0,00
FL DST on MGIT	786,60	0	0,00
PZA DST on MGIT	0,00	0	0,00
Liquid 2nd-line DST on MGIT when using ready-made lyophilized reagents	0,00	0	0,00
Liquid 2nd-line DST on MGIT when using pure drug powder reagents	0,00	0	0,00
<b>Sub-total</b>	<b>782 293,25</b>		

Cleaning and biosafety	Cost (US\$)
Biosafety	9 617,30
Cleaning	2 608,95
<b>Sub-total</b>	<b>12 226,25</b>

Maintenance and repair	Cost (US\$)
Biosafety cabinets	5000,00
Twincubator (LPA)	2000,00



## Annual budget overview



Reagents and consumables		Cost (US\$)	Total no. of tests	Cost per test
ZN microscopy if consumables are procured in kit	4 288,00	18 000	0,24	
ZN microscopy if consumables are procured separately	0,00	18 000	0,00	
LED microscopy if consumables are procured in kit	0,00	0	0,00	

Cleaning and biosafety	Cost (US\$)
Biosafety	9 617,30
Cleaning	2 608,95

**Sub-total 12 226,25**

Maintenance and repair	Cost (US\$)
Biosafety cabinets	5000,00
Twincubator (LPA)	2000,00

# LAB item summary



GDF code	Reagents & consumables	Qty
ZN microscopy		
106522	ZN Kit	16
LED microscopy if consumables are procured in kit		
106523	LED kit	0
106602	Methylene blue, 10 x 10 g (bottles)	0
TB-LAMP		
106634	Loopamp MTBC Detection Kit (2 x 48 tests)	0
106635	Loopamp PURE DNA Extraction Kit (90 tests)	0
106643	Pipette-60 set for TB LAMP (4 x 96 tests)	0
Truenat		
106697	Truenat MTB Plus	0



**Thanks to**  
**Riccardo Alagna, formerly San Raffaele Institute,**  
**Milano, Italy**  
**GLI core group member**  
**Alexei Korobitsyn**





**It's time for action**  
**It's time to END TB**

