

## National Tuberculosis Programme

राष्ट्रिय क्षयरोग कार्यक्रम

## Smear Result Sheet for Lot Quality Assurance System

खकार लेप परीक्षणको गुणस्तर जाँच नतीजा फारम

Microscopy Center सूक्ष्मदर्शकीय केन्द्र:.....

District जिल्ला:.....

Local Level स्थानीय तह:.....

Month: From.....To.....

Quarter/Year.....quarter of 20..... / 20.....

महिना:.....देखि.....सम्म

चौमासिक/साल:.....चौमासिक २०...../२०.....

Date of Record रेकर्ड मिति:.....

Lab Incharge प्रयोगशाला प्रमुख:.....

Recorded दथ रेकर्ड गर्ने:.....Signature सहीछाप:.....

Contact No. ....E-mail.....

Name of LQAS Supervisor: -.....Signature: .....

MC Report of Previous Year 20 / 20 अघिल्लो आ.व. २०.../२० को प्रतिवेदन					Process of Slide Selection स्लाइड छनौट गर्ने तरिका					MC Report of Current Fiscal Year .....Qtr. 20 / 20 चालु आ. व. को प्रतिवेदन:चौमासिक...२०.../२०.....									
Total Slides Examined कूल स्लाइड परीक्षण				Annual Sample Size वार्षिक नमूना संकलन संख्या				S. No. of First Slide Selected छनौट गरिएको पहिलो स्लाइड क्रम संख्या											
Total Negative Slides कूल नेगेटिभ स्लाइड परीक्षण				Quarterly Sample Size चौमासिकनमूना संकलन संख्या				Total Negative Slides Sent for EQA गुणस्तर जापचका लागि पठाइएको जम्मा नेगेटिभ स्लाइड संख्या											
Total Positive Slides कूल पोजिटिभ स्लाइड परीक्षण				Total Slides Examined during last Quarter गत चौमासिकको कूल स्लाइड परीक्षण संख्या				Total Positive Slides Sent for EQA गुणस्तर जापचका लागि पठाइएको जम्मा पोजिटिभ स्लाइड संख्या											
Slide Positivity Rate % स्लाइड पोजिटिभिटी प्रतिशत				Slide Interval ..... <sup>th</sup> slide स्लाइड अन्तर" " औ स्लाइड				Total Slides Sent for EQA गुणस्तर जापचका लागि पठाइएको कूल स्लाइड संख्या											
Suspected Person		F	M	Total	Smear A Slide A		F	M	Total	Smear B Slide B		F	M	Total	Follow Up Slide		F	M	Total
	+ve					+ve					+ve					+ve			
	-ve					-ve					-ve					-ve			
	Total					Total					Total					Total			

Note: Fill the information of current Quarter properly in this table (Suspected person, Smear A, B and Follow-up Smear)

S.N. क्र. सं.	Slide No. स्लाइड नं.	Result नतीजा	S.N. क्र. सं.	Slide No. स्लाइड नं.	Result नतीजा	S.N. क्र. सं.	Slide No. स्लाइड नं.	Result नतीजा
1			11			21		
2			12			22		
3			13			23		
4			14			24		
5			15			25		
6			16			26		
7			17			27		
8			18			28		
9			19			29		
10			20			30		

**SAMPLE SIZE DETERMINATION WITH EXAMPLES**

There are some important steps for sample size determination;

**Step 1**

From the lab register of the previous year:

Calculate the total slides examined/year = 1250

Total No. of positive slides/year = 125

Total No. of negative slides/year = 1125

**Step 2**

Calculate slide positivity rate (SPR) = total No. of positive slides per year / total No. of slide \*100 (round off to the nearest % i.e. 10 %).

$$SPR = \frac{\text{Total no of Positive Slides per year}}{\text{Total no of slides}} \times 100$$

*(SPR is valid for one year only or new SPR should be calculated for each year)*

**Step 3**

Decide on acceptable limits of performance in your lab

Relative sensitivity (ability of lab staff to detect AFB relative to the controller) = 75%

Acceptance No. {(Maximum number of errors (d))} = 0

**Step 4**

Select appropriate sample size table

If a sensitivity of 75 % and d = 0 is chosen, look at the left side of the table to find the annual negative slide volume = 1000 and SPR = 7.5%, then sample size for this year = 96

**Step 5**

Decide on a convenient interval to select the slide

Recommended 3 times per year i.e. quarterly. Therefore,  $96/3 = 32$  slides to be collected every quarter (for current fiscal year)

$$\text{Quarterly Sample Size} = \frac{\text{Annual sample size}}{3}$$

**Step 6**

Systematically collect the slides using the laboratory register

Suppose 250 slides have been processed during last quarter (the quarter participating in EQA), 32 slides need to be collected for the current quarter, therefore:  $250/32 = 7.8$

Collect every 7th slide.

$$\text{Slide interval} = \frac{\text{Slide examined in previous quarter}}{\text{No of slide to be collected in current quarter}}$$

**Step 7**

For the first or starting slide; use the last digit of a bank note (repeat for digit 0,1 & 9)

The annual sample size should be fixed beforehand by the Reference Level using LQAS Table 4 and 5.

Recommended annual sample sizes: Table 4 and 5 shows the number of slides recommended for blinded rechecking at various workloads and slide positivity rates. The table has been compiled on the basis of a sensitivity of 75% and specificity of 100% (for negative slides); acceptance number for errors equal to zero (d=0); and confidence level of 95%. The number of slides to be selected (sample size) should be fixed beforehand by the NTP. Determining sample size should not be left to the supervisor collecting the slides or to the technicians.