

ACID FAST BACILLUS

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A total of 16 microscopy slides are dispatched to participating laboratory in four quarterly survey exercises (four slides per quarter). Participants are required to stain, microscopically examine and report the presence/absence of acid fast bacilli (AFB) as well as the staining method(s) before the due dates.

Scores of “two” and “zero” is assigned to correct and incorrect/nil result, respectively. Falsely positive and negative results are considered as major errors.

Quarterly survey report encloses results submitted by the participating laboratories and the intended results together with their respective score. “NIL RETURN” indicates no return of test results. A year-end report displays the total scores and the successful rate of participating laboratory in the correct identification of AFB.

Table 1 shows the summary of control smears.

Summary of Control Smears - 2008				
Control smears	Total Numbers	Number of Correct Returns	Number of Incorrect Returns	Accuracy (%)
Overall total	496	491	5	99.0%
Positive control	403	398	5	98.8%
Negative control	93	93	0	100.0%

Table 2 shows the break-down.

Detail Break-down of Control Smears - 2008					
Smear ID	Intended Result	Numbers Issued	Numbers of Correct Returns	Numbers of Incorrect Returns	%Correct Returns
X14	AFB Absent	62	62	0	100.0%
X16	AFB Present	31	31	0	100.0%
X17	AFB Present	119	119	0	100.0%
X18	AFB Present	112	108	4	96.4%
X19	AFB Present	48	48	0	100.0%
X24	AFB Present	31	31	0	100.0%
X25	AFB Present	31	30	1	96.8%
X26	AFB Present	31	31	0	100.0%
X27	AFB Absent	31	31	0	100.0%
	Overall total	496	491	5	99.0%
	Positive control	403	398	5	98.8%
	Negative control	93	93	0	100.0%

Table 3 shows the summary of participants' performance.

Summary of Participants' Performance - 2008	
Number of participants	31
Number of participants with 100% return	31 (100%)
Range of score of participants	88% - 100%
Number of participants with 100% score	27 (87.1%)

Table 4 shows the break-down.

Detail Break-down of Participants' Performance – 2008						
Lab Code	Number of Despatches	Number of Returns	% Return	Possible Score	Actual Score	% Score
002	4	4	100%	32	30	94%
029	4	4	100%	32	32	100%
062	4	4	100%	32	32	100%
136	4	4	100%	32	32	100%
144	4	4	100%	32	32	100%
168	4	4	100%	32	32	100%
218	4	4	100%	32	32	100%
263	4	4	100%	32	32	100%
354	4	4	100%	32	32	100%
361	4	4	100%	32	32	100%
366	4	4	100%	32	32	100%
416	4	4	100%	32	28	88%
456	4	4	100%	32	32	100%
495	4	4	100%	32	32	100%
508	4	4	100%	32	32	100%
523	4	4	100%	32	32	100%
609	4	4	100%	32	32	100%
621	4	4	100%	32	32	100%
626	4	4	100%	32	30	94%
642	4	4	100%	32	32	100%
658	4	4	100%	32	32	100%
668	4	4	100%	32	32	100%
683	4	4	100%	32	32	100%
714	4	4	100%	32	32	100%
737	4	4	100%	32	32	100%
762	4	4	100%	32	32	100%
821	4	4	100%	32	32	100%
922	4	4	100%	32	32	100%
947	4	4	100%	32	30	94%
963	4	4	100%	32	32	100%
997	4	4	100%	32	32	100%

Table 5 shows the summary of staining methods used by the participants

Staining method	2008-1	2008-2	2008-3	2008-4
Fluorescence only	1	2	2	2
ZN only	19	19	19	17
Fluorescence and ZN	11	10	10	10

With effective from 2008, the following remark was added to reports with unexpected results:
“N.B. This is a major error. Please review your AFB procedures.”

References:

1. Chadwick MC. Institute of Medical Laboratory Sciences Monographs: Mycobacteria. Wright PSG 1982;47-49
2. Kent PT, Kubica GP. Public Health Mycobacteriology. A guide for the level III laboratory. US Department of Health and Human Services, Public Health Service, Centers for Disease Control 1985;57-59.