Gram Smear Interpretive Criteria - Suggested Guidelines

The CMPT Gram stain-interpretive criteria were developed from published schemata that varied widely. For example, some published criteria grade the numbers of cells according to observations using a low-power field (LPF, ×100) in contrast to the oil immersion field (OIF, ×1,000) recommended by others, and there is no consensus as to how many fields need to be examined, although clearly more than 10 and perhaps as many as 20 to 40 fields must be read for each slide.

Note: This scale was created using x100 objectives with an 18 mm field of view.

Cells			Bacteria		
Description		**No./OIF (using x100 objective)**	**Description**		**No./OIF (using x100 objective)**
1+	Rare	<1	1+	Rare	<1
2+	Few	1-5	2+	Few	2-10
3+	Moderate	6-10	3+	Moderate	11-50
4+	Many	>10	4+	Many	>50

- The direct Gram stain can provide the clinician with useful information that can assist in directing antimicrobial therapy.
- Correlation between the Gram stain and culture results is important and where discrepancies occur, the smear should be reviewed and any amendments or comments can be added to the report to highlight any changes or discrepancies**.**

SPUTUM SAMPLES

Information of the Gram smear should always be available before the culture result and since a critical laboratory decision has been made based on the smear, it is imperative that a smear interpretation be provided

Failure to check the suitability of a sputum sample is considered as a pre-examination reporting error. To facilitate proper reporting, in 2006-2007 CMPT added a simple checkbox on the report form.