

GRAM'S STAINS

Colorimetric reagent for the in-vitro quantitative determination of urea in human serum, plasma and urine on both manual and automated systems.

REF: BS.1/GR04.100.0400 4 X 100 ml

Principle :

In 1884 Gram described this method, which is the most important stain in routine bacteriology. It divides bacteria into two categories depending on whether they can be decolorized with acetone, alcohol or aniline oil after staining with one of the rosaniline dyes such as crystal violet, methyl violet or gentian violet, and treating with iodine. Those that resist decolorization remain blue or violet in color and are designated Gram-positive, those that are decolorized and take up red counterstain, such as neutral red, safranin or dilute carbol-fuchsin, (are termed Gram-neutral red, safranin or dilute carbol-fuchsin, are termed Gram negative.) Although many investigators have tried to uncover the mechanism of the gram reaction no universal answer has yet been found and it is possible that more than one mechanism exists

REAGENT COMPOSITION

Solution 1	Methyl Violet 6 B Distilled water
Solution 2	Lugol's iodide: Potassium iodine distilled water iodine
Solution 3	Decolorizer, absolute ethyl alcohol or acetone
Solution 4	Counterstain, neutral red.

ASSAY PROCEDURE :

- 1-prepare a smear allow to dry and fix with gentle heat.
- 2- Apply solution 1 for 30s , Rinse in water.
- 3-Replace solution 1 with solution 2 and allow to act for 30s 1 min.
- 4-Rinse with solution 3 and continue application until no more color appears to flow from the preparation.
- 5- Wash with water.
- 6- Apply solution 4 for 3 min.
- 7- Rinse with water, blot carefully and dry with gentle heat.

RESULTS:

Gram-positive organisms. Blue black; Gram negative organisms, red.

N.B

. This procedure is only a guid and it preferable if each laboratory established his own conditions.

PERFORMANCE CHARACTERISTICS

Precision	Within run (Repeatability)		Run to run (Reproducibility)	
	Normal level	High level	Normal level	High level
n	20	20	20	20
Mean mg/dl	60	144	62	146
SD.	1.87	2.1	1.92	2.5
CV. %	3.12	1.46	3.25	1.65

The results of the performance characteristics depend on the analyzer used.

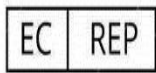
Gram positive organisms – Purple

Gram negative organisms – Red

If observed results vary from expected results, please contact Arena Technical service for assistance.

Fits your perfection

SYMBOLS IN PRODUCT LABELLING		
IVD	For in-vitro diagnostic use	 Number of <n> test in the pack
LOT	Batch Code/Lot number	 Caution
REF	Catalogue Number	 Do not use if package is damaged
	Temperature Limitation	 Consult Instruction for use
	Expiration Date	
	Manufactured by	



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