

# AG- GRAM'S STAINING KIT (IFU)

## PRINCIPLE

The Gram stain, the most widely used staining procedure in bacteriology, is a complex and differential staining procedure. Through a series of staining and decolorization steps, organisms in the domain Bacteria are differentiated according to cell wall composition. The Gram stain is fundamental to the phenotypic characterization of bacteria. The staining procedure differentiates Bacteria according to cell wall structure. Gram-positive cells have a thick peptidoglycan layer and stain blue to purple. Gram-negative cells have a thin peptidoglycan layer and stain red to pink.

## PACKAGE CONTENTS:

Description	Catalogue Number	Quantity
Gram's Crystal violet stain	AG/Stain/GS/22/01	200ml
Gram's Iodine (mordant)		200ml
Gram's Acetone-Ethanol Decolorizer		200ml
Gram's counter stain		200ml

## STORAGE & STABILITY:

Gram's stain Kit should be stored at 15-25°C in their original containers. Product stored under these conditions will be stable until the expiry date shown on the product label. Kindly filter Grams primary stain and counter stain if precipitation occurs.

## TYPES OF SPECIMENS:

Bacterial smears on slide

## SPECIMEN COLLECTION & HANDLING:

Samples should be handled by trained professionals

## DIRECTIONS/PROCEDURE

1. Prepare a thin smear on clear, dry glass slide. Allow it to air dry and fix by gentle heat.
2. Flood air-dried, heat-fixed smear of cells for 1 minute with Gram's Crystal violet stain. Please note that the quality of the smear (too heavy or too light cell concentration) will affect the Gram Stain results.
3. Wash slide in a gentle and indirect stream of tap water for 2 seconds.
4. Flood slide with the mordant: Gram's iodine. Wait 1 minute.
5. Wash slide in a gentle and indirect stream of tap water for 2 seconds.
6. Flood slide with the provided Gram's decolorizer. Wait 15 seconds or add the decolorizer drop by drop to slide until decolorizing agent running from the slide runs clear.
7. Flood slide with the provided Gram's counterstain. Wait for 1 minute.
8. Wash slide in a gentle and indirect stream of tap water until no color appears in the effluent and then blot dry with absorbent paper.
9. Observe the results of the staining procedure under oil immersion using a light microscope.

## INTERPRETATION OF THE RESULTS

Gram-negative bacteria will stain pink/red and gram-positive bacteria will stain blue/purple.

## LIMITATION:

- Only experienced personnel should carry out the interpretation of stained slides.
- Read prepared slides as soon as possible after staining. Failure to do so may affect the results.

## WARNING & PRECAUTIONS:

- For *In vitro* Diagnostic Use only.
- For professional use only.
- Directions should be read and followed carefully.
- Do not use beyond the stated expiration dates.
- Microbial contamination may decrease the accuracy of the staining
- Safety precautions should be taken in handling, processing and discarding all clinical specimens.
- Samples should be processed in the correct containment level conditions.
- Dispose of all material in accordance with local regulations.

## SYMBOLS:



Date of manufacture



Use-by-date



Do not use if package is damaged



Manufacturer



Batch Code



Refer to the instructions



ISO



GMP



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