

GRAM STAIN SET

Stain set for differential staining of bacteria originated from primary samples and cultures.

Solutions	
Code number:	4 x 250 ml: GPK61000, 4 x 1000 ml: GPK64000
Colour of Crystal Violet Solution:	Purple
Colour of Lugol Solution:	Light brown
Colour of Decolourizer Solution:	Water clear
Colour of Safranin Solution:	Red
Appearance:	Transparent, residue-free solutions

Procedure:

- Staining:** Pour the Crystal Violet Solution onto the smear (prepared on fat-free slide, and fixed with heat). Incubation time: 30 seconds. After incubation rinse the slide carefully with tap water.
- Staining:** Stain the slide with Lugol Solution. Incubation time: 30 seconds. After incubation rinse the slide carefully with tap water.
- Decolouration:** Apply Decolourizer Solution by dropping it onto the slanted slide until the dripping solution becomes colourless. After decolouration rinse the slide carefully with tap water.
- Contrast staining:** Stain the slide with Safranin Solution. Incubation time: 30 seconds. After incubation rinse the slide carefully with tap water.
- Drying:** Leave the slide in vertical position to become dry totally at room temperature.

Evaluation: Gram positive: Dark purple colonies.
Gram negative: Red colonies.

FORMULA

CRYSTAL VIOLET SOLUTION	
Crystal violet	2 %
Ammonium oxalate	1 %
Solvent	Ethanol + distilled water

LUGOL SOLUTION	
Iodine	0,33 %
Potassium iodide	0,66 %
Solvent	Distilled water

DECOLOURIZER SOLUTION	
Acetone	10 %
Ethanol	90 %

SAFRANIN SOLUTION	
Safranin	0,3 %
Solvent	Ethanol + distilled water

Storage conditions: Store the bottles protected from light at room temperature. Use before the expiry date on the label.

Quality control:

Test strains	Staining
<i>Streptococcus pneumoniae</i>	Dark purple
<i>Escherichia coli</i>	Red

References: Gram (1884) Fortschritte der Medizin 2: 185

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