



Product Specification

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GRAM'S DECOLOURIZER

PRODUCT CODE 840120

Intended Use

Gram's decolourizer is used as a decolourizing solution in Gram staining.

Principle And Interpretation

The Gram stain is a differential staining technique most widely applied in all microbiology disciplines laboratories. It is one of the most important criteria in any identification scheme for all types of bacterial isolates. Different mechanisms have been proposed to explain the gram reaction. There are many physiological differences between gram-positive and gram-negative cell walls. Ever since Christian Gram has discovered Gram staining, this process has been extensively investigated and redefined. In practice, a thin smear of bacterial cells is stained with crystal violet, then treated with an iodine containing mordant to increase the binding of primary stain. A decolourizing solution of alcohol or acetone is used to remove the crystal violet from cells which bind it weakly and then the counterstain (like safranin) is used to provide a colour contrast in those cells that are decolourized. The gram-positive organisms or cells have more mucopeptide in their cell walls as compared to gram negative ones. Gram-negative bacteria have more content of polysaccharides and lipo-proteins in their cell walls. The polymers of glycerol or ribitol phosphate called as teichoic acids are also found in the cell walls of gram-positive organisms but are very less or almost not present in gram-negative organisms. In a properly stained smear by gram staining procedure, the gram-positive bacteria appear blue to purple and gram negative cells appear pink to red.

PARAMETER	LIMIT
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Description	Clear colourless liquid.
Suitability	Paases test

Directions

1. Prepare a thin smear on clear, dry glass slide.
2. Allow it to air dry and fix by gentle heat.
3. Flood with Gram's Crystal Violet for 1 minute. (If over staining results in improper decolourization of known gram-negative organisms, use less crystal violet).
4. Wash with tap water.
5. Flood the smear with Gram's Iodine . Allow it to remain for 1 minute.
6. Decolourize with Gram's Decolourizer until the blue dye no longer flows from the smear. (Acetone may be used as a decolourizing agent with caution, since this solvent very rapidly decolourized the smear).
7. Wash with tap water.
8. Counter stain with 0.5% w/v Safranin for 20 seconds and rinses off with water.
9. Wash with tap water.
10. Allow the slide to air dry or blot dry between sheets of clean bibulous paper and examine under oil immersion objective.

Results

Gram-positive microorganisms : violet
Gram-negative microorganisms : pinkish red

Note(s) : Assay (if applicable) method mentioned.

WARNING

HAZARD STATEMENTS : May cause respiratory irritation. Flammable liquid and vapour. Harmful if swallowed.
Causes mild skin irritation. Causes eye irritation.

PRECAUTIONARY STATEMENTS :

Prevention : Ground/bond container and receiving equipment. Use only nonsparking tools. Take precautionary Measures against static discharge. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this

product. Keep away from heat/sparks/open flame - No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Wear protective gloves and eye/face protection.

Response : If eye irritation persists, get medical advice/attention. If skin irritation occurs, seek medical advice/attention. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment: refer to Label or MSDS. If on skin or hair: remove/take off immediately all contaminated clothing. Rinse with water/shower. In case of fire, use foam for extinction.

Disposal : Allow to evaporate in safe open area (applicable for small quantities). The chemical should be burnt in a chemical incinerator equipped with burner and scrubber. If the volumes are larger than 500ml and no incinerator

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and site of evaporation is not available then transfer the waste chemical to waste solvent drum for collection by specialist disposal company.

Hazard Pictogram(s) :



GHS02



GHS07

Replace date 20-Dec-2023