

# GRAM DECOLORIZER 2 SOLUTION

IVD *In vitro* diagnostic medical device



## Solution for use in Gram bacterial staining

### INSTRUCTIONS FOR USE

REF Catalogue number: GD2-OT-100 (100 ml) GD2-OT-250 (250 ml) GD2-OT-500 (500 ml) GD2-OT-1L (1000 mL) GD2-OT-2.5L (2500 mL)

#### Introduction

BioGnost's Gram Decolorizer 2 solution is a transparent ethanol and acetone solution. It is used in microscopic microbiological diagnostics in processes of Gram staining. Gram Decolorizer 2 solution reacts moderately fast and it is suitable for manual staining methods. It is a part of the BioGram 4 kit and it should be used in Gram staining processes combined with BioGnost's stabilized iodine solution.

#### Product description

- **GRAM DECOLORIZER 2 SOLUTION** - Acetone and ethanol solution of moderate reaction rate used for Gram staining processes.

#### Other preparations and reagents that may be used:

- Primary dye solution for differential Gram staining, such as BioGnost's Gram Crystal Violet 1% solution.
- Iodine solution used for differential Gram staining, such as stabilized BioGnost's Gram Lugol solution
- Counterstain solution for differentiating Gram staining, such as BioGnost's Gram Safranin solution
- Glass slides used in microbiology, such as VitroGnost ECONOMY GRADE or glass slides used in cytology, such as VitroGnost STANDARD GRADE or high quality glass slides used in histopathology, such as VitroGnost SUPER GRADE or one of more than 30 models of VitroGnost glass slides.
- BioGnost's immersion media, such as Immersion oil, Immersion oil, types A, C, FF, 37, or Immersion oil Tropical Grade

#### Preparing the sample for staining

- Transfer the sample on a clean glass slide using a sterilized smear loop.  
Note: Bodily fluids, discharge, pus, and liquid or solid bacterial culture can be used as samples.
- Spread the sample evenly across the glass slide using 1-2 drops of saline solution.
- Fixate the sample using the Bunsen burner after drying by wriggling the glass slide through the cone of flame for 2-3 times.
- Cool the glass slide and begin the process of staining.

#### Sample staining procedure

1.	Stain with Gram Crystal Violet 1% solution	1 min
2.	Pour excessive dye off the section.	
3.	<ul style="list-style-type: none"> <li>• Rinse the section carefully using stabilized Gram Lugol solution.</li> </ul>	
4.	Fix the dye by treating the section using stabilized Gram Lugol solution	1 min
5.	<ul style="list-style-type: none"> <li>• Rinse the section carefully with distilled/demineralized water.</li> </ul>	5 seconds
6.	<ul style="list-style-type: none"> <li>• Treat the preparation using Gram Decolorizer 2 solution.</li> <li>• End the process when the section turns grey-blue.</li> </ul>	10-15 seconds
	Note: By overly treating with Decolorizer solution, the dye will be washed away from Gram-positive bacteria as well.	
7.	<ul style="list-style-type: none"> <li>• Rinse the section carefully with distilled/demineralized water.</li> </ul>	5 seconds
8.	<ul style="list-style-type: none"> <li>• Treat the preparation using Gram Safranin solution.</li> </ul>	1 min
9.	<ul style="list-style-type: none"> <li>• Rinse the section carefully with distilled/demineralized water.</li> </ul>	5 seconds
10.	<ul style="list-style-type: none"> <li>• Dry the section using filter paper or let it dry by air.</li> </ul>	
11.	<ul style="list-style-type: none"> <li>• Add a drop of immersion oil on the section (Cedar or Immersion oil).</li> </ul>	
12.	<ul style="list-style-type: none"> <li>• Examine the section under immersion lens.</li> </ul>	

#### Result

Gram-positive bacteria - blue-purple

Gram-negative bacteria - red

#### Note

Microbiology staining procedures are not standardized and they depend on standard operating procedures of individual laboratories and the experience of the personnel conducting the staining procedure. Intensity of staining depends on the period of immersion in the dye. Depending on personal requests and standard laboratory operating procedures, sample processing and staining can be carried out according to other protocols. Acetone and ethanol contained in Gram Decolorizer 2 solution are highly flammable. Extreme caution is advised. Avoid breathing in the fumes and keep the bottle firmly sealed and away from the source of ignition.

#### Preparing the sample and diagnostics

Use only appropriate instruments for collecting and preparing the samples. Process the samples with modern technology and mark them clearly. Follow the manufacturer's instructions for use. In order to avoid mistakes, the staining procedure and diagnostics should only be conducted by authorized and qualified personnel. Use only microscope according to standards of the medical diagnostic laboratory. In order to avoid an erroneous result, a positive and negative check is advised before application.

### Safety at work and environmental protection

Handle the product in accordance with safety at work and environmental protection guidelines. Used solutions and out of date solutions should be disposed of as special waste in accordance with national guidelines. Chemicals used in this procedure could pose danger to human health. Tested tissue specimens are potentially infectious. Necessary safety measures for protecting human health should be taken in accordance with good laboratory practice. Act in accordance with signs and warnings notices printed on the product's label, as well as in BioGnost's material safety data sheet.











### Storing, stability and expiry date

Keep the Gram Decolorizer 2 solution in a tightly sealed original packaging at temperature of 15 to 25 °C. Keep in dry places, do not freeze and avoid exposing to direct sunlight. Date of manufacture and expiry date are printed on the product's label.

### References

1. Myers, Richard L. (2007): *The 100 Most Important Chemical Compounds: A Reference Guide*, Westport, Conn.: Greenwood Press

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 Refer to the supplied documentation	 Storage temperature range	 Number of tests in package	<b>REF</b> Product code	 European Conformity
 Refer to supplied instructions	 Keep away from heat and sunlight	 Valid until	<b>LOT</b> Lot number	 Manufacturer
<b>IVD</b> For <i>in vitro</i> diagnostic use only	 Keep in dry place	 Caution - fragile		

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