



Product Specification

cdhfinechemical.com

MALACHITE GREEN SOLUTION 1% w/v

PRODUCT CODE 863430

Intended Use

Malachite Green 1% w/v is used as staining solution in spore staining and simple staining.

Principle And Interpretation

Malachite Green is used for bacterial spore staining by Schaeffer and Fulton's method. It can also use as a simple stain for bacterial cells and in place of methyl green. A spore is a dormant form of the bacterium that allows it to survive in drastic environmental conditions. Spores have a tough outer covering made of the protein keratin and are resistant to heat and chemicals. The keratin also resists staining, so extreme measures must be taken to stain the spore. In the Schaeffer-Fulton's method, a primary stain malachite green is forced into the spore by steaming the bacterial emulsion. Malachite green is water soluble and has a low affinity for cellular material, so vegetative cells may be decolorized with water. Vegetative cells are then counterstained with safranin. Spores may be located in the middle of the cell, at the end of the cell, or between the end and middle of the cell. Spore shape may also be of diagnostic use. Spores may be spherical or elliptical. Members of the genus *Corynebacterium* may exhibit club-shaped swellings that might be confused with spores. Spore staining distinguishes between true spores and these structures.

PARAMETER	LIMIT
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Description	A green coloured, clear solution.
Solubility	Miscible with water.
Identification	Passes test
Concentration	0.99-1.1%
Suitability for microscopy	Passes test

Directions

1. Prepare a smear on a clear, dry glass slide.
2. Allow it to air dry and fix it with gentle heat.
3. Flood the slide with 1% w/v Malachite Green.
4. Allow the stain to be in contact with the smear for 2-3 minutes and heat the preparation for 3-6 minutes and then allow to cool.
5. Wash in slow-running tap water.
6. Counterstain with 0.5% aqueous safranin/ Schaeffer and Fulton's Spore stain B for 30 seconds.
7. Wash with water, blot dry and examine under oil immersion objective

Results

Spores are seen as green spherules in red stained rods or red stained debris

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

WARNING

Hazard statements : May cause respiratory irritation. Causes skin irritation. Causes serious eye irritation.

Precautionary statements

Prevention: Avoid breathing dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician if you feel unwell. If eye irritation persists: Get medical advice/attention.

Disposal: Dissolve the chemical to be disposed, in water and allow it to run to waste, diluting with large quantities of water.

IMDG Code : 8/III

UN No. : 2790

IATA : 8

Hazard Pictogram(s) :



GHS07

Replace date 19-Dec-2023