BacterLab Division

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BacterStain™ Alcohol

MICROBIOLOGICAL STAIN
BacterStain™ Alcohol

An solvent used in staining methods, such as Gram staining, to decolorize bacteria, fix, and dry cell samples

Code: 04011

1. INTENDED USE

BacterStrain™ Alcohol is used in staining methods such as Gram staining and cell staining to decolorize bacteria and cells during the staining process. In Gram staining, alcohol helps remove excess dye from Gram-negative bacteria while retaining the color in Gram-positive bacteria. Alcohol is also used to fix cell samples, clean samples, and dry them after staining.

2. PRINCIPLES

BacterStrain™ Alcohol acts as a decolorizer in Gram staining. When alcohol is applied, it penetrates the bacterial cell wall and causes it to shrink or expand, depending on the type of cell. Gram-positive bacteria, with thicker peptidoglycan layers, retain the dye (Crystal Violet), while Gram-negative bacteria lose the color due to their thinner cell wall, which is more easily decolorized by alcohol. Additionally, alcohol helps dehydrate and dry the cell sample, making it easier to observe under the microscope.

3. TYPICAL COMPOSITION

For 1 liter of strain

Alcohol	1000 mL

4. PREPARATION

The stain are ready-to-use, no preparation required.

5. INSTRUCTIONS FOR USE

Used in Gram Strain Kit

- Prepare a thin smear on clear, dry glass slide.
- Allow it to air dry and fix by gentle heat
- Flood with **BacterStain™ Crystal Violet** (Code: 04007) for 1 minute.
- Wash with tap water
- Flood the smear with **BacterStain™ Lugol** (Code: 04005). Allow it to remain for 1 minute
- Decolourize with **BacterStain™ Alcohol** (Code: 04011) until the blue dye no longer flows from the smear
- Wash with tap water
- Counter stain with **BacterStain™ Safranine** (Code: 04008) for 1 minutes and rinses off with water
- Allow the slide to air dry or blot dry between sheets of clean bibulous paper and examine under oil immersion objective

6. RESULTS

- Gram-positive bacteria stain dark violet with gentian: *Staphylococcus, Streptococcus, Pneumococcus, Diphtheria bacillus, Bacillus anthracis.*

- Gram-negative bacteria do not stain violet with gentian, so they appear pink-red with fuchsin: *Neisseria gonorrhoeae, Neisseria meningitidis, Escherichia coli, Shigella, Salmonella, Vibrio cholerae*.

7. QUALITY CONTROL

BacterLab ensures the quality of each product batch by testing with ATCC reference strains.

Reference strains	Conditions	Expected results
S. aureus ATCC 25923	oil immersion lens (100x)	dark violet with gentian
E. coli ATCC 35218		pink-red with fuchsin

8. STORAGE AND TRANSPORT CONDITIONS

- Storage: 18 – 25°C.
- Transportation: Ambient temperature.

9. PACKAGING

- Packaging: 100mL/ bottle or according to the customer's request..

10. SHELF LIFE

- Expiration Date: 24 months from the manufacturing date.

11. BIBLIOGRAPHY

- Himedia Laboratories. (n.d.). *Gram Stains Kit (Contains S012, S032, S013, and S027 or S038)*. Retrieved February 25, 2025, from https://www.himedialabs.com/us/k001-gram-stains-kit-contains-s012-s032-s013-and-s027-or-s038.html