

## Gram stain

A set of two stains that are used to stain (crystal violet and iodine) and counterstain (fuchsin) bacteria. Gram-negative bacteria are completely decolorized after treating the stained bacteria with ethanol or acetone and can be visualized by the counterstain. They have a complex cell wall in which the peptidoglycan layer is covered by lipopolysaccharides in an outer membrane structure. Gram-positive bacteria resist decolorization by ethanol or acetone, they retain the initial Gram stain. They have a cell wall consisting predominantly of peptidoglycan not overlaid by an outer membrane.

**Source:**

PAC, 1992, 64, 143 (*Glossary for chemists of terms used in biotechnology (IUPAC Recommendations 1992)*) on page 155